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# Manufacturers Record

## Exponent of America



$6.50 per Year.
Single Copy, 20 Cents.

Baltimore, Md.
JULY 5, 1923


# JULY THE FOURTH.

We shall miss the real meaning of July Fourth and its deeper significance if we fail to see the guiding hand of Providence through the last 147 years, and with reverence give thanks that we are permitted to live in this Heaven favored land and at the same time to realize the dangers which menace our country, and do our utmost to overcome them.

In our boasted liberty we have given the foreigners who have settled here too much excuse to believe in wild license. We have discredited our own Government by disregarding and breaking its laws. We have become a lawless nation, disregarding practically all laws which do not harmonize with our own individual views. The automobile speeder, whether he be of high or low social standing, is a criminal if he is a reckless driver disregarding the laws of his State. The man who drives an automobile while intoxicated is a criminal, and regardless of his social position should be put in jail and made to pay the penalty of his law-breaking act which endangers the lives of others. Many of the deaths from automobile accidents are due to criminal breaking of the speed laws and the driving of automobiles by men under the influence of drink, and instead of being accidents these are murders.

The people who trample the Prohibition laws in the mud and mire, who break them whenever it suits their convenience, are criminals doing their utmost to destroy our civilization and our Government itself, it matters not how high may be their social standing or how great their wealth.

One man thinks he can violate the law against driving an automobile while he is under the influence of liquor, or driving at a speed contrary to the law. Death is often the result, but unfortunately, not his death, but the death of the innocent. He is a murderer. Another man, under the claim of personal liberty when there is no such thing as personal liberty, violates the Prohibition laws; and he too, regardless of his social or financial standing seeks to break down all law and become a co-worker with the murderous bootlegger. Other men violate other laws, and thus year by year lawlessness spreads throughout the land endangering the very existence of that Government which came into being as a result of the action taken 147 years ago.

"Oh, Liberty! Liberty! What crimes are committed in thy name!" But it is not through liberty, but through law violation that crimes are committed.

They know not liberty who cannot control their passions and their own tempers, for they substitute for liberty, license, which is the destruction of liberty.

It is appropriate that upon this natal day of this Republic, men and women should forget some of the frivolity of the hour and concentrate their thoughts upon the struggle which brought this Republic into existence, and the trials through which it has passed. Its dangers during the Civil War of 1861-'65, or during all of the foreign wars which it has faced since this Government was established, were never as great as they are today. If, as Lincoln said, this nation dies, it will be by suicide through the violation of law.

Back to obedience to law! Back to a recognition of the supreme importance of maintaining every law, if we would maintain our liberty, must be the compelling force of all our people. We cannot go on encouraging lawlessness, or even winking at the violation of law, or failing to stamp with our disapproval every act of every law violator of high or low degree, without breaking down the reverence for law, and thus undermining the very foundation of our Government.

False to all the past, false to all the future, will be the people of the present generation who fail to recognize the dangers of the hour and to do their utmost to save our country from disintegration through the violation of law.

# OUR CUSTOMERS

For more than twenty years The Youngstown Sheet & Tube Company has been building a great business on the firm foundations of Honor and Service.

In these years it has built or acquired facilities scarcely to be excelled in either efficiency or capacity for the manufacture of iron and steel products of many kinds.

And it has also created a system for the distribution of these products to every part of the world, so that the name "YOUNGSTOWN" is known in every land in which iron and steel are used as a symbol of uniform excellence and an assurance of satisfaction to the user.

But the most important achievement of this company has been the establishment of a conviction among its customers that it regards their interests as highly as its own; that it holds their prosperity and success essential to its prosperity and success, and that it strives always to serve them faithfully and well.

As a result, these customers have come to be recognized as a distinct group—notable alike for their business standing and their unswerving loyalty. They are not bargain-hunters in times of stagnation, and are not premium-payers in times when demand exceeds supply. They are assured uniform quality of product, fair treatment and fair prices, no matter what conditions may prevail in the trade.

The recent purchase of the Brier Hill Steel Company's plants has added materially to our production capacity, especially in the line of sheets and plates, enabling us to serve additional customers, and we welcome inquiries from those to whom our policy and product appeal.

**Youngstown**

PIPE — SHEETS — PLATES
MERCHANT BARS—RODS
WIRE — NAILS — FENCE
HOOPS—RIGID CONDUIT
STEEL ARMORED CABLE

Works at
YOUNGSTOWN
EAST YOUNGSTOWN
STRUTHERS
HUBBARD
GIRARD
NILES
and
WARREN
Ohio

Ore Mines on the
MESABA, CAYUNA,
GOGEBIC, MENOMINEE,
MARQUETTE and VERMILLION
Ranges.

Coal Mines At
NEMACOLIN, PA.
and
BRIER HILL, PA.

## THE YOUNGSTOWN SHEET & TUBE COMPANY
**Youngstown, Ohio**

DISTRICT SALES OFFICES

BOSTON—120 Franklin St.
NEW YORK—30 Church St.
PHILADELPHIA—Pennsylvania Bldg.
ATLANTA—Healey Bldg.
PITTSBURGH—Oliver Bldg.
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ST. LOUIS—1139 Olive St.
DENVER—First Nat'l Bank Bldg.
DALLAS—1401-2 Magnolia Bldg.
SAN FRANCISCO—604 Mission St.
SEATTLE—Central Bldg.

## A Few Standard Types of Truscon Buildings

Lengths: Any Multiple of 2'-0". Heights: 8'-1" or 21'-5".

Any combination of types; any door or window arrangement; lanterns, canopies and lean-tos as desired.



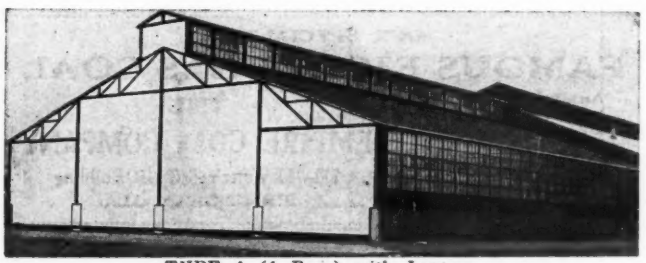
TYPE 1 (Clear Span)
Widths—8'-12'-16'-20'-24'-28'-32'-40'-48'-50'-60'-68'



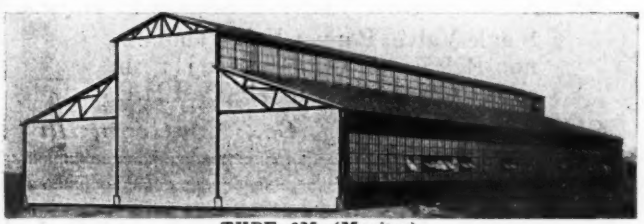
TYPE 2 (2 Bays)
Widths—40'-48'-50'-56'-60'



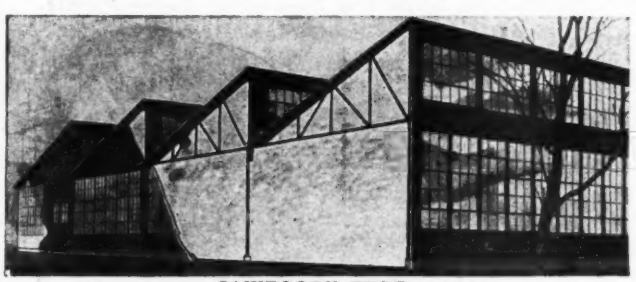
TYPE 3 (3 Bays)
Widths—56'-60'-64'-68'-72'-76'-80'-84'-88'-96'-98'-106'-108'-116'



TYPE 4 (4 Bays) with Lantern
Widths—80'-100'-112' (4 Bays @ 20'-25' or 28')



TYPE 3M (Monitor)
Widths—60'-64'-68'-72'-76'-80'-84'-88'-90'-96'-98'-100'-106'-108'-116'



SAWTOOTH TYPE
Widths—Any Multiple of 28'-0'

# TRUSCON STANDARD BUILDINGS

## To Fill Your Exact Needs

Permanent, fireproof buildings that exactly meet every individual requirement yet are economical in cost, Truscon Standard Building are ordered and reordered by leaders in American industry. A few typical arrangements are here shown. All buildings have steel windows and doors.

Over 10,000,000 square feet of floor area of Truscon Standard Buildings are now in successful use for factories, warehouses, foundries, shops, railroad buildings, oil buildings, garages, service stations, and many other purposes. The standardized units composing these buildings make possible an infinite variety of sizes and arrangements. They also permit of dismantling the buildings and re-erecting them with 100% salvage value.

## Write for Details

If you are planning to build, learn how Truscon Standard Buildings can serve *your* needs exactly. Return coupon or write us for suggestions, catalogue, and prices.

**TRUSCON STEEL COMPANY**
**YOUNGSTOWN, OHIO**

***Warehouses and Sales Offices in Principal Cities***

**TRUSCON STEEL CO., YOUNGSTOWN, OHIO**

***Warehouses and Sales Offices in Principal Cities***

Send useful building book and suggestions on building to be used for_____

Type_____ Length_____ Width_____ Height_____

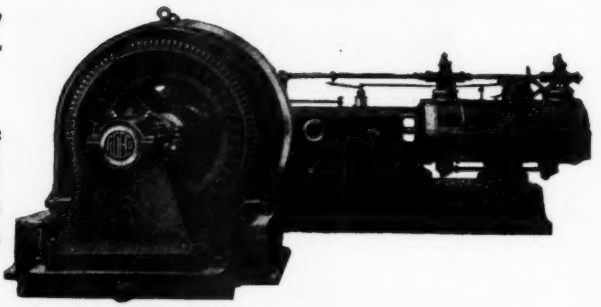
*Name*_____

*Address*_____

# RIDGWAY
## UNAFLOW ENGINES

**EVERY user, or prospective buyer of Unaflow Type Engines should know and be familiar with the RIDGWAY.**

**Combining as it does the essential features of the Unaflow principle—with the traditional RIDGWAY thoroughness of construction, it is a favorite of practically every engineer that has made an accurate comparison.**



**Bulletin 29 tells in complete detail the story of this RIDGWAY triumph—ask for it.**

## Ridgway Dynamo & Engine Co.
### Ridgway, Pennsylvania

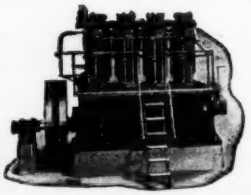
**Manufacturers of Unaflow, Poppet Valve Engines; Four Valve Engines; Single Valve, Side Crank Engines; Single Valve, Center Crank Engines; Alternating Current Generators; Direct Current Generators; Motor-Generators; Turbo-Generator Sets; Synchronous Converters.**

**BRANCH OFFICES IN—New York, Boston, Philadelphia, Wilkes-Barre, Grand Rapids, Pittsburgh, Cleveland, Cincinnati, Chicago, Minneapolis, Omaha, St. Louis, Kansas City, Chattanooga, Little Rock, New Orleans, Denver, San Francisco.**

THE FOOS

**THIRTY-SIX YEARS EXPERIENCE**

We have been improving the FOOS for over thirty-six years, which enables offering you an engine that incorporates all the desirable features brought out in that time in connection with internal combustion engine development.



**All fuels 6 to 325 H. P.**

THE FOOS GAS ENGINE CO., SPRINGFIELD, OHIO

OUR SPECIALTY

## FAMOUS EMPIRE GAS COAL

| Analysis Empire Coal | |
|---|---|
| Moisture | 1.45 % |
| Volatile Matter | 36.57 % |
| Fixed Carbon | 59.63 % |
| Ash | 2.35 % |
| | 100.00 % |
| Sulphur | 0.93 % |
| B. T. U. | 14.986% |

THE
**EMPIRE COAL COMPANY**
711-717 American Trust Building
BIRMINGHAM, ALA.

## *CHUSE ENGINES*

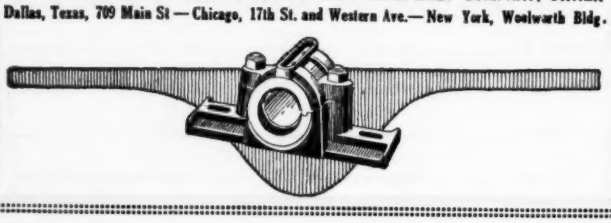
Single Valve, Poppet Valve Uniflow, non-Releasing Corliss; built in sizes 100 I.H.P. to 1600 I.H.P.

***Chuse Engine & Mfg. Co., Mattoon, Ill.***

## TRANSMISSION MACHINERY

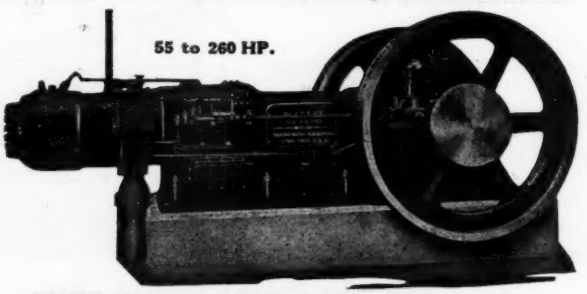
THE Caldwell line is complete. Bearings—heavy, properly designed, and well finished. Pulleys of ample weight and accurately turned. The entire line has achieved outstanding recognition under hard service. Let us figure on your requirements.

H. W. CALDWELL & SON CO. LINK-BELT COMPANY, OWNER
Dallas, Texas, 709 Main St—Chicago, 17th St. and Western Ave.—New York, Woolworth Bldg.



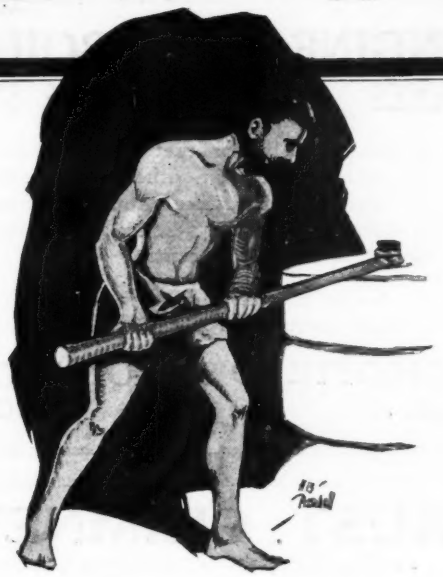
## BUCKEYE OIL ENGINES
for
**Factory, Mill, Mine and Municipal Power Plants.**

55 to 260 HP.



**THE BUCKEYE MACHINE CO.**
LIMA, OHIO.

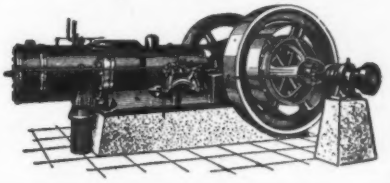
·· Power Talks ·· No. 6 ··



# The Methods of the Ancients

¶ The ancient handmill is obselete today ~ Years ago it was one of the few known sources of power. ¶ Later *Steam* supplanted hand and horse power ~ and today ~ *OIL* is taking the place of steam as a power producer ¶ PRIMM *Oil Engines deliver dependable power at minimum cost* ~ ~

¶ *Find out more about this Modern engine!*



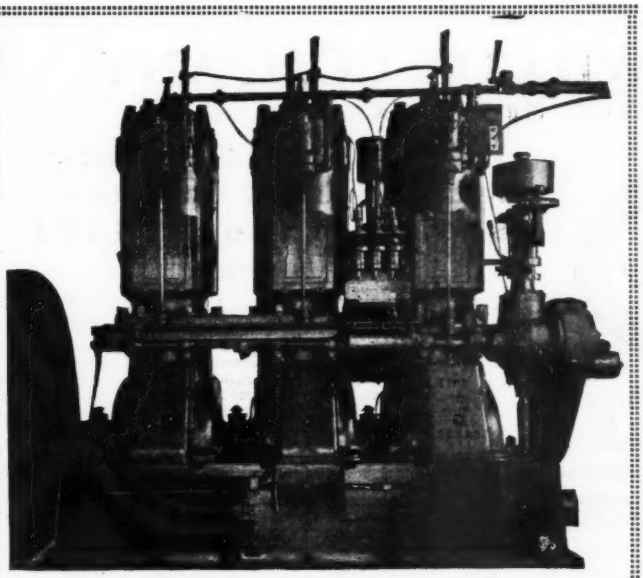
# PRIMM OIL ENGINES

**20 TO 300 H.P.**

**THE POWER MANUFACTURING CO.**

**703 Cheney Ave., Marion, Ohio**

*Service Built In At The Factory and Maintained in the Field*



## TIPS SEMI-DIESEL HEAVY OIL ENGINES

**Vertical multi-cylinder Type "J"**

**30 to 165 HP**

Complete water jacketed, cylinder head and combustion chamber.

Chrome-Vanadium crankshaft.

All governor and pump parts adjustable while engine is running.

Fuel pumps under governor control; no by-passes; unit control of pumps.

***Write for Bulletin J***

## TIPS ENGINE WORKS

**AUSTIN, TEXAS**

**FOR HEAVY DUTY**

# Beaver

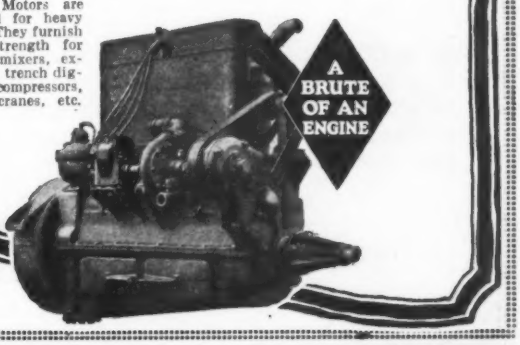
—For any type or style of construction equipment, power operated, you will find a Beaver engine particularly adaptable.

—Manufacturers now using Beaver will testify to its dependability and surplus power. Beaver valves are in the head giving more power per explosion. A perfected manifold delivers dry gas to favorably shaped combustion chambers. And there are many other advantages which explain the great smooth power of Beaver.

***Complete technical data sent on request.***

## BEAVER MANUFACTURING CO.

Beaver Motors are designed for heavy duty. They furnish *Brute* strength for pavers, mixers, excavators, trench diggers, compressors, hoists, cranes, etc.



# SPRINGFIELD BOILERS

NO STAY BOLTS NO BRACES NO BENT TUBES

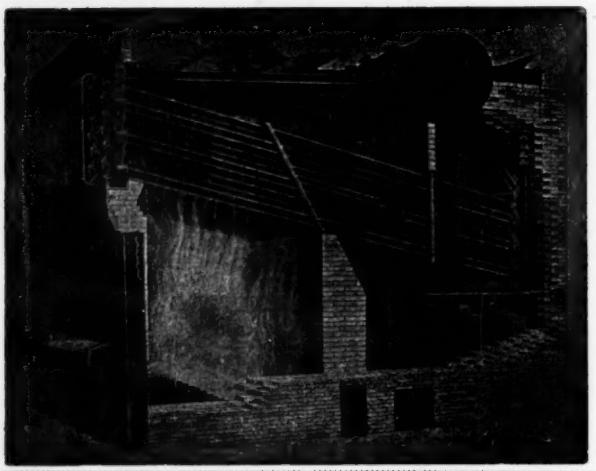
**Sizes to 3000 H. P.—Pressures to 500 lbs.**

Are all steel throughout and this benefit of all-steel construction enables us to offer a more substantial boiler, requiring less space for like capacity and consequently less brick for its setting than the ordinary type.

With the exception of expanding a few tubes, there is no mechanical work required in erecting the SPRINGFIELD.

*We will be glad to give you any information you desire on request.*

**SPRINGFIELD BOILER CO.**
SPRINGFIELD, ILL., U. S. A.



# ENGINES BOILERS
## TANKS TOWERS SMOKE STACKS

If you are in the market for the above, get our prices. We are Southern Manufacturers, and not only manufacture, but guarantee our products. We want you to take advantage of our 50 years' experience.

*Write us for further information and become a satisfied customer.*

**SCHOFIELD'S IRON WORKS**
Dept. H MACON, GA.

# RUST CHIMNEYS

RADIAL BRICK AND REINFORCED CONCRETE
REFRACTORY BRICKWORK

**THE RUST ENGINEERING CO.**
ENGINEERS AND CONTRACTORS

Pittsburgh Washington Birmingham

# CHARLESTON DRY DOCK & MACHINE CO.

Successors to VALK & MURDOCH CO.

**MARINE AND STATIONARY BOILERS**
**Repairs to Steel and Wooden Vessels**

8,000-ton Dry Dock - 1,500 and 600-ton Marine Railways

**CHARLESTON, S. C.**

# THE BABCOCK & WILCOX COMPANY

85 LIBERTY STREET, NEW YORK

**Builders since 1868 of Water Tube Boilers of continuing reliability**

BRANCH OFFICES
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THE BABCOCK & WILCOX COMPANY STEAM

WORKS
Bayonne, N. J.
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**Makers of Steam Superheaters since 1898 and of Chain Grate Stokers since 1893**

BRANCH OFFICES
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Salt Lake City, 705-6 Kearns Building
San Francisco, Sheldon Building
Los Angeles, 404-6 Central Building
Seattle, L. C. Smith Building
Havana, Cuba, Calle de Aguiar 104
San Juan, Porto Rico, Royal Bank Building

# BROWNELL BOILERS

**SIGNIFIES** Long Life, Highest Efficiency, Low Maintenance and Mechanically correct. This accounts for **Brownell Boilers** being specified by leading Engineers and high class Architects who demand the best.

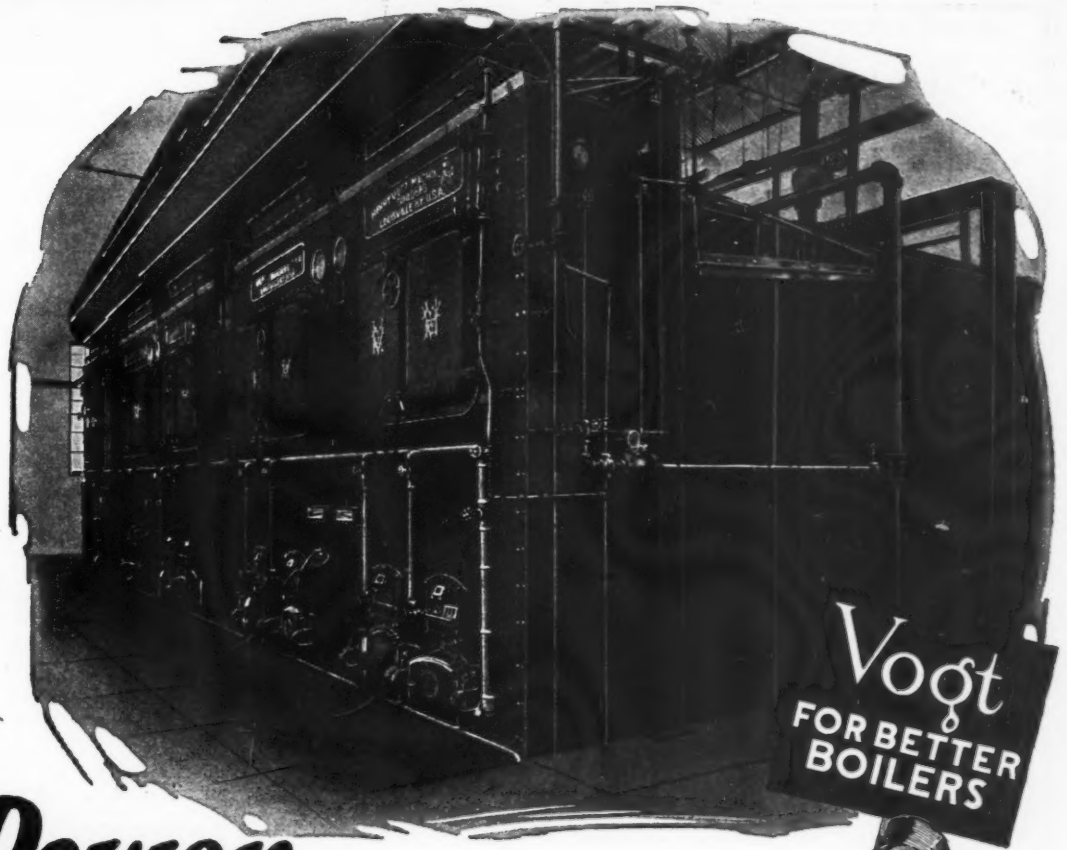
THE BROWNELL COMPANY the World Over SINCE 1855 DAYTON, OHIO, U.S.A.

A **Contract** means little unless the concern with which you are dealing is one of known reliability. The **Brownell Company** with its 68 years of experience as manufacturers of **QUALITY PRODUCTS** has 68 years of reputation to maintain, therefore, you take no risk in sending us your order.

**Sales Representatives in All Sections of the Country**

**THE BROWNELL COMPANY, Dayton, Ohio, U. S. A.**

**Established 1855**




# The Power Of The Plant!



The heart of your plant is the boiler. When it ceases to function, operation stops. It is vital then to choose a boiler, the design of which, assures the highest efficiency and unquestionable construction. Upon these two points rests the prestige of the Vogt H. R. T. Boilers. The many installations where these boilers are proving their worth is their best recommendation. Our H. R. T. Bulletin describes in detail the skilled workmanship and construction of these boilers in our large modernly equipped shops. The Vogt H. R. T. Boilers conform with the A. S. M. E. Specifications.

*Write Today for Bulletin H. R. T. No. 5.*

## The Vogt TUBULAR BOILER

**HENRY VOGT MACHINE CO.**
*Incorporated*
**LOUISVILLE, KY.**

BRANCH OFFICES: NEW YORK, CHICAGO, PHILADELPHIA, DALLAS

**MANUFACTURERS OF WATER TUBE AND HORIZONTAL RETURN TUBULAR BOILERS :: ICE-MAKING AND REFRIGERATING MACHINERY :: DROP FORGED STEEL VALVES AND FITTINGS :: OIL REFINERY EQUIPMENT**

Erie City Vertical Water Tube Boilers insure dry steam, unrestricted circulation, free expansion, low maintenance, and high economy in fuel. They are noted for long service under severe operating conditions.

*Get the facts about Erie City Iron Works products before buying.*

# ERIE CITY IRON WORKS

**ERIE, PENNSYLVANIA, U. S. A.**

*WE BUILD*

*Horizontal Water Tube Boilers*
*Return Tubular Stationary Boilers*
*"Economic" Return Tubular Boilers*
*Lentz Engines*
*Pulverized Coal Apparatus*

***SATISFACTION, DURABILITY AND SERVICE INSURED WITH THE USE OF***

## POWELL VALVES

(*Especially The White Star Valve*)

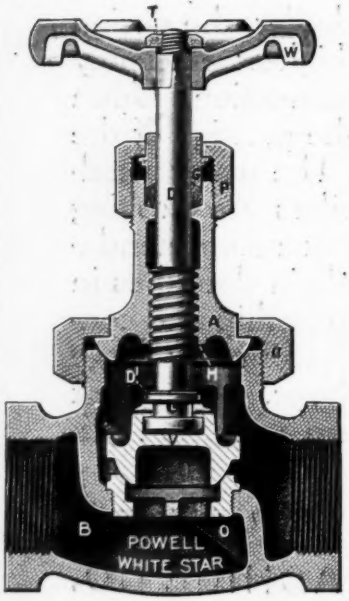



Fig. 102

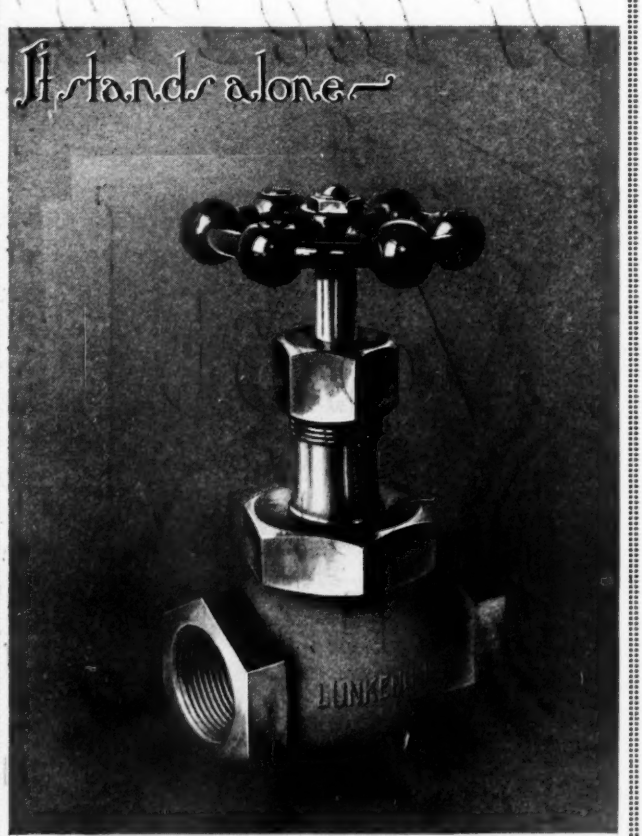
Steam working pressure up to 200 pounds.

Extra Heavy for pressure up to 300 pounds. Regrindable, renewable seat, renewable disc, cast of non-corrosive.

**Powellium**
Nickel
Specify
**Powell White Star Valves**

*Write for descriptive Circular.*

THE WM. POWELL CO
DEPENDABLE ENGINEERING SPECIALTIES
CINCINNATI, O.




3-30-62

THE LUNKENHEIMER CO.
CINCINNATI



*Fig. 108, Screwed, Standard Bronze Angle Valve.*



*Fig. 106, Screwed, Standard Bronze Globe Valve.*



*Fig. 325, Screwed, Standard Iron Body Gate Valve.*

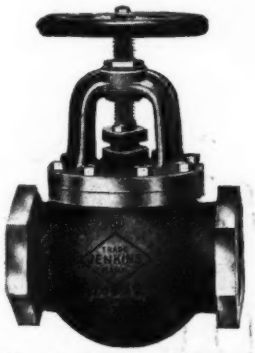


*Fig. 141, Screwed, Standard Iron Body Globe Valve.*

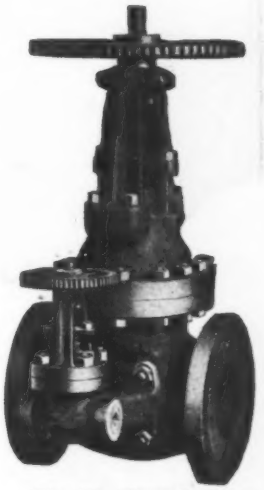


*Fig. 389, Flanged, Extra Heavy Cast Steel Gate Valve with By-Pass.*

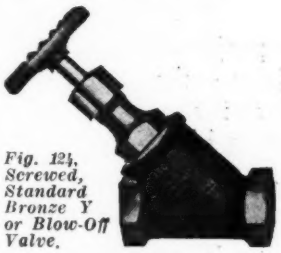


*Fig. 124, Screwed, Standard Bronze Y or Blow-Off Valve.*



*Fig. 352, Screwed, Standard Bronze Swing Check Valve.*



*Fig. 720, Jenkins Bronze Rapid Action Valve.*



*Fig. 451, Screwed, Standard Iron Body, Horizontal Check Valve.*

# For service—for economy "Jenkins throughout"

You can install Jenkins Valves with an assurance of reliable service—years and years of service, which mean true valve economy.

In design and construction, Jenkins Valves benefit by over 58 years' knowledge of valves and valve requirements. Each valve is made in every respect to meet the most severe conditions in the use for which it is recommended.

Illustrated are a few of the most commonly used Jenkins Valves taken from our comprehensive line of Bronze, Iron, and Steel Valves in types and sizes for all pressures and purposes.

Jenkins Valves are obtainable through supply houses everywhere.

JENKINS BROS.

New York Boston Philadelphia Chicago
Montreal London

FACTORIES: Bridgeport, Conn.; Elizabeth, N. J.; Montreal, Canada




# Jenkins Valves

SINCE 1864

# How THERMOLITH

*The All-Temperature Fire Cement*



# Stands *the* Test *of* Bombardment



**THERMOLITH "TEST-TELLS"**

"Test-Tells", which will be sent free on request, demonstrate plainly why Thermolith so successfully stands up under the three great tests: the Seger Cone Test, the Arch Test and the Sand Blast Test.

THOUSANDS of tiny, flint-hard particles projected against a Thermolith bonded fire brick joint,—the severest abrasion ineffectual against Thermolith as it successfully withstands the attack of the sharp-cutting blast!

The sand-blast test, here illustrated, graphically demonstrates the durability of the Thermolith joint. Even though first quality fire brick are being rapidly cut away, Thermolith persistently maintains its structure and bond.

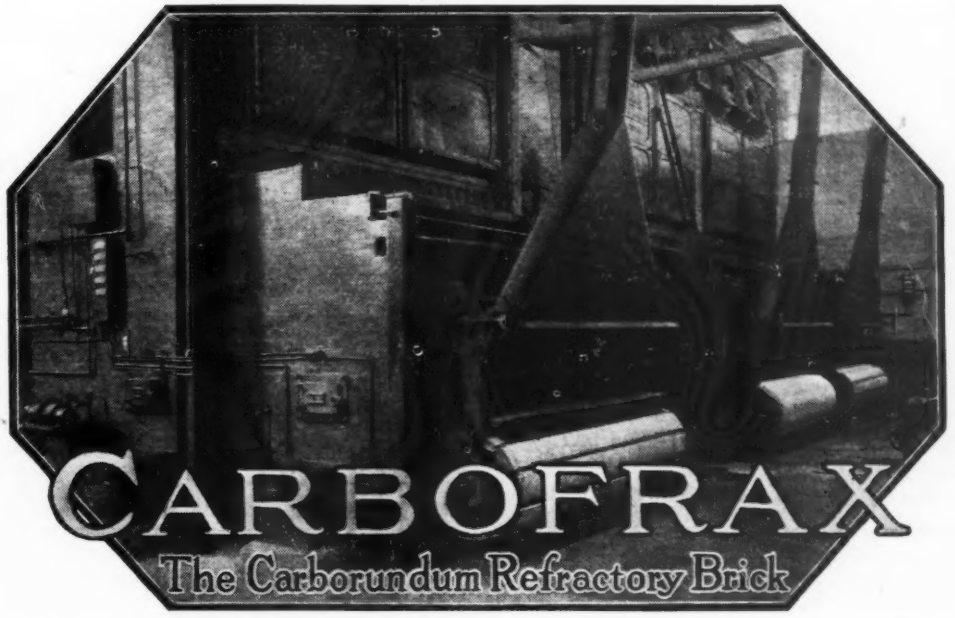
Thermolith retains the same durable qualities under actual furnace conditions, effectually resisting the abrasion of moving furnace charge, powdered fuel flame, dust-laden gases, stoking abuse, etc. It lengthens the life of the lining by making the weakest part the strongest.

***Thermolith comes in the form of a dry powder, packed in air-tight metal drums of 200 pounds each. There is no water to pay for or add to carriage charges. Thermolith requires no extraordinary care in handling or storing. It is effective, economical, and quickly pays for itself.***

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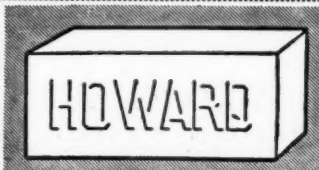

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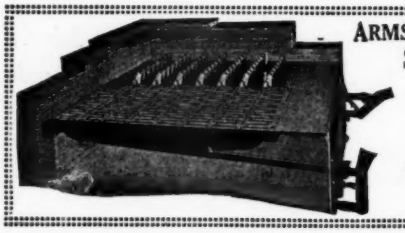



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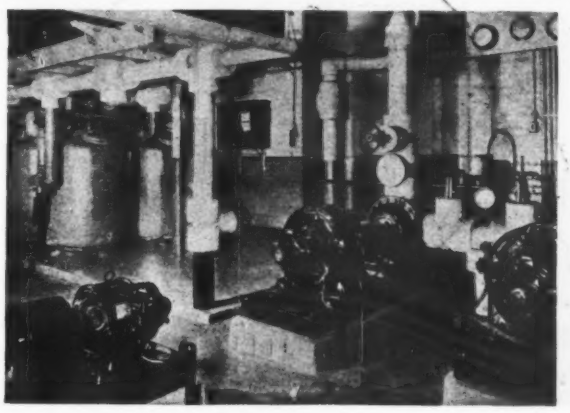
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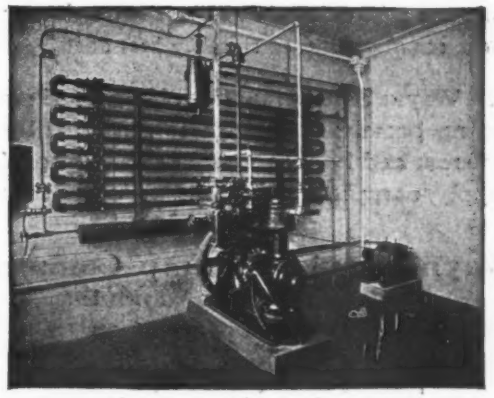
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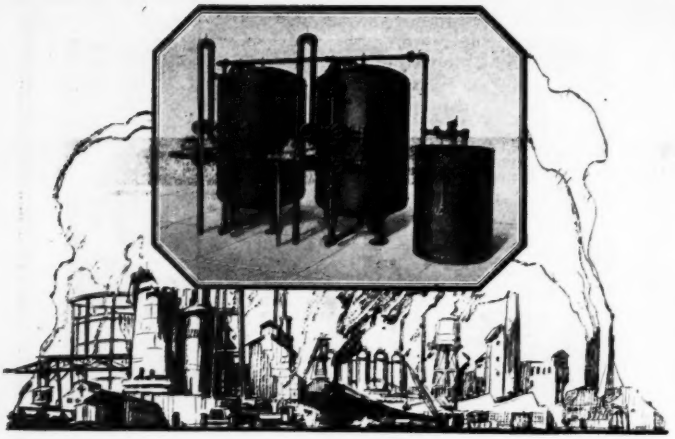
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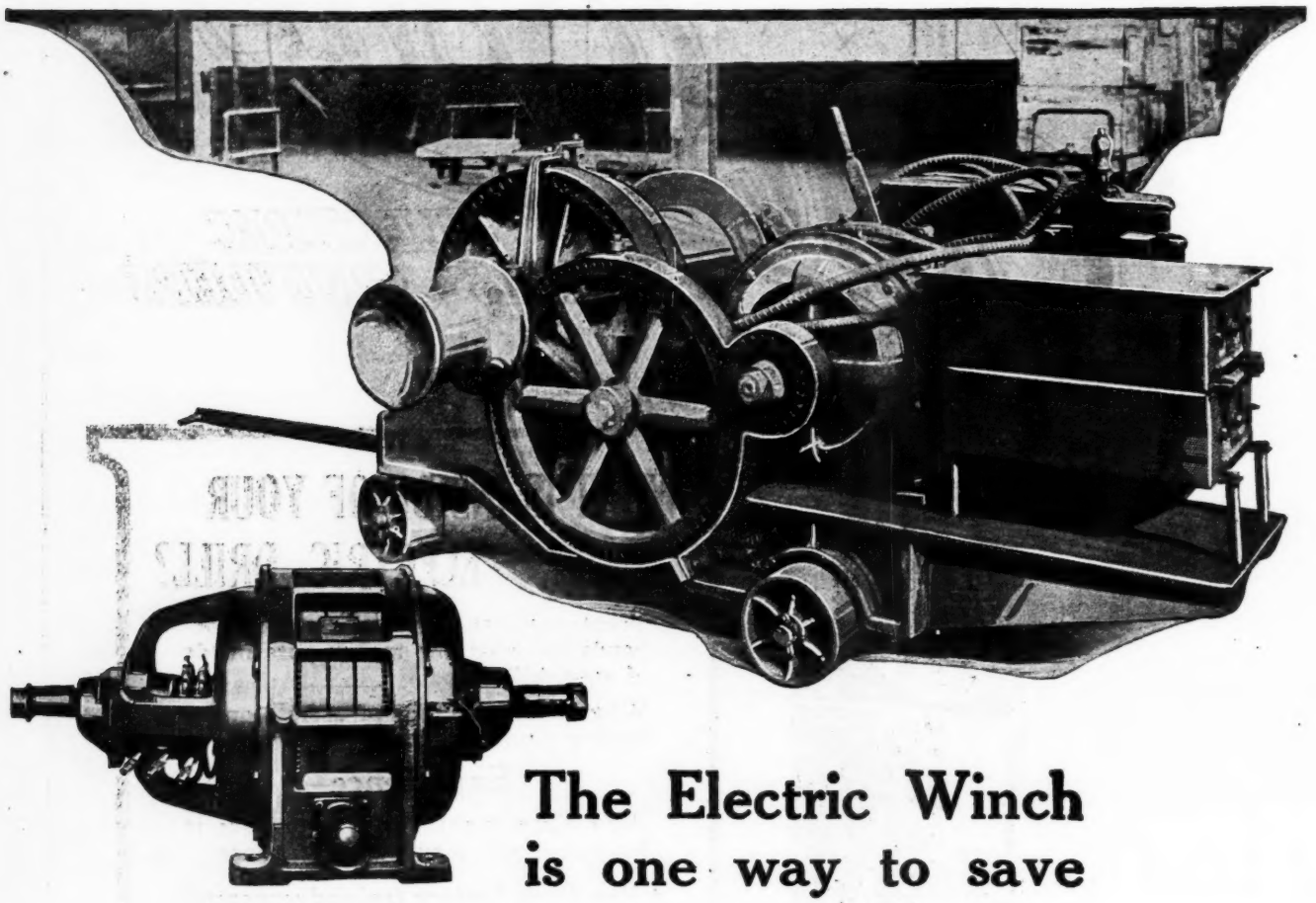
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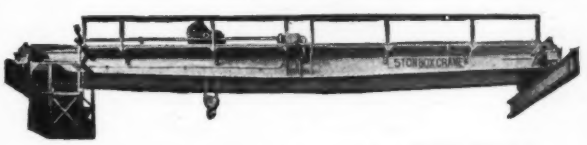
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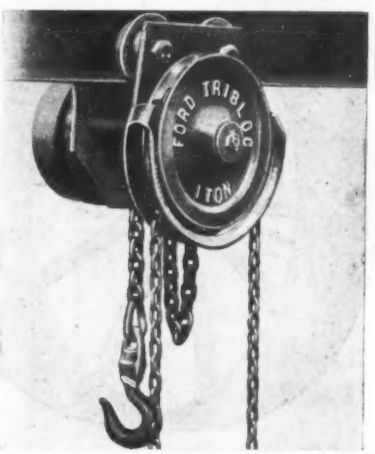
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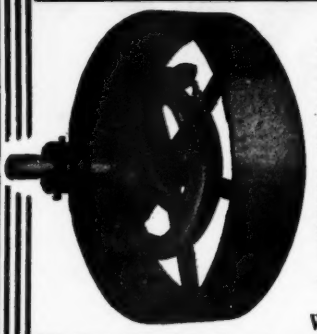
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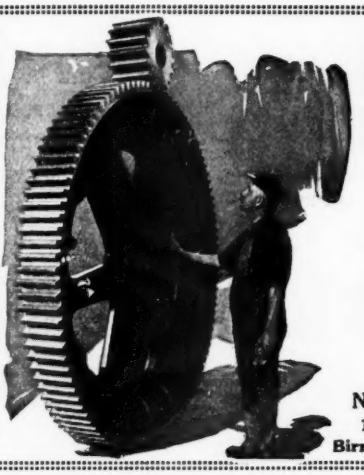
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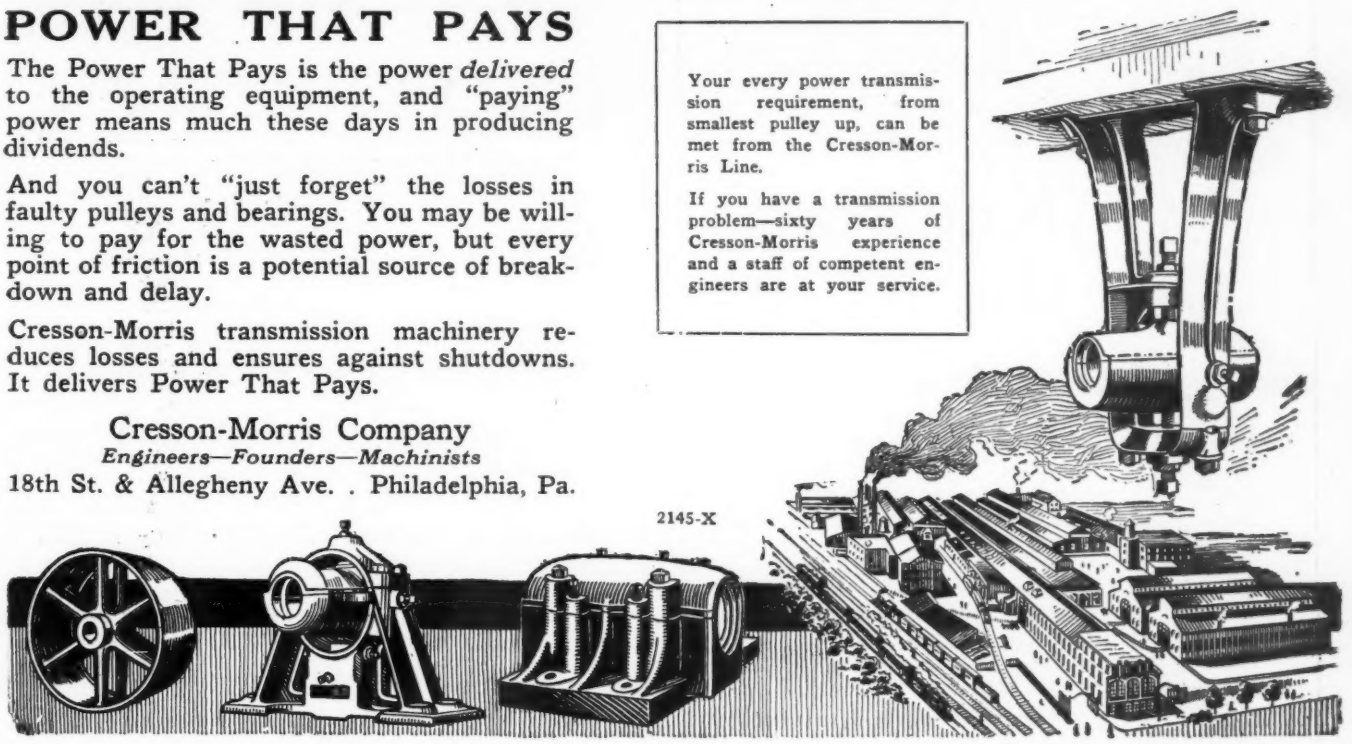
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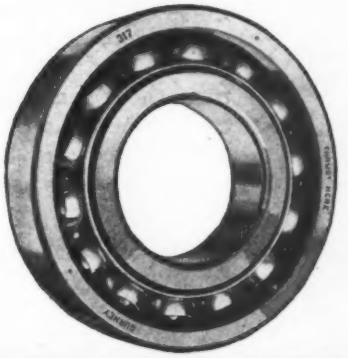
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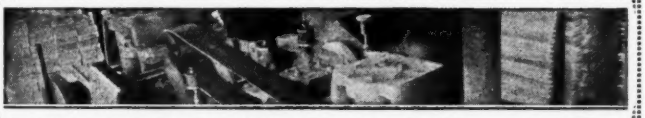
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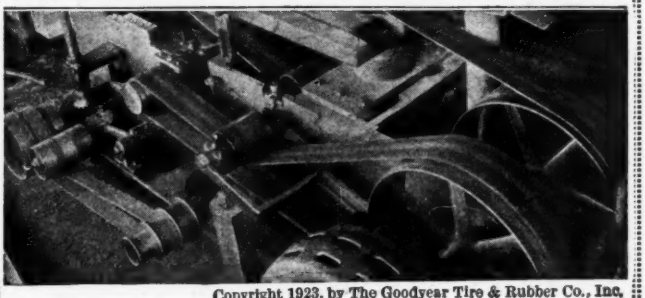


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The correct weight and kind of duck in the right number of plies, bonded with a tenacious rubber friction and amply protected by a properly resistant rubber cover—these go to make up a conveyor belt possessing inherent quality.



*Our conveniently located branches enable you to put your conveying problems up to our representatives for competent advice and solution.*

NEW YORK BELTING & PACKING CO.

New York Boston Chicago Philadelphia Pittsburgh
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## "SPEAKING OF BELT DRESSING"

**DIXON'S SOLID BELT DRESSING**

"Here's the best we ever had. The men like it better because it does not rot the belts by drying out their life.

"When belts slip they do not only waste power but destroy themselves as well.

"It costs money to renew belts frequently and it costs to throw away power every day. That's why so many keen business men and managers have written for Dixon's booklet No. 80-O, on the proper care of belts."

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Established 1827

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**Solid and Cored Bars in 12" Lengths**

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Having our own belt shop, we can guarantee our product and our deliveries.

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Unexcelled for use in damp and steamy places.

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MILL SUPPLIES, TOOLS and MACHINERY
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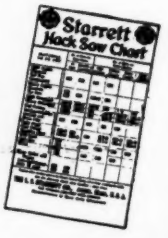
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of a hack saw is in the cutting. Starrett blades deliver the **most** cuts at the **least** time per cut—the proof lies in their increasing use by manufacturers who recognize the economy of **good** blades used **right**.

*Write for Catalog No. 22 "EC" and the Supplement describing the new Starrett Tools.*




**THE L. S. STARRETT CO.**
*The World's Greatest Toolmakers*
*Manufacturers of Hacksaws Unexcelled*
**ATHOL, MASS.**

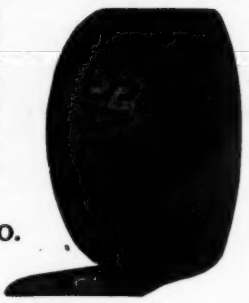
The Starrett Hack Saw Chart shows workmen at a glance the correct blade to use for any kind of work. Free on request. Write for "Hack Saws and their Use"—an impartial book on the subject.

**Starrett Hacksaws**

**For Efficiency Always**

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Manufactured from 32-oz. duck and designed to give the best results in actual service. Made for all conditions of power transmission—inside or outside—wet or dry. Chesapeake Belting has been giving satisfactory service for over 30 years.



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*There is MORE POWER in*

**THAT GOOD GULF GASOLINE AND SUPREME AUTO OIL**

*Look for the Sign of the Orange Disc*

GULF REFINING CO.

All Men Know It— Knowing Men Use It!

# Albany Grease




## "Slick Stuff for any Bearin'"
### says Uncle John Albany

"I've used Albany Grease on every kind of machine from 3,000 H.P. engines to 3,000 r.p.m. roller bearing spindles. One place I found a lineshaft running right through the boiler room, and they told me there wasn't anything that would stay in the large grease cups over the boiler. That was easy—I just put in XXX hard Albany and never had any drip at all. The boss gave me the credit—but I know he's still buying Albany Grease."

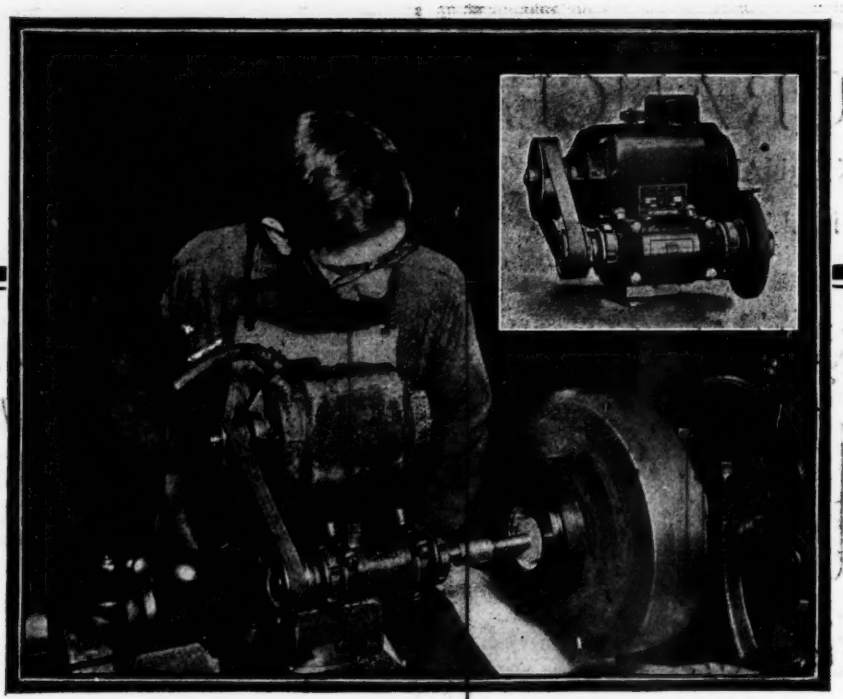
Albany Grease—the pure tallow compound—"stays put" in the cup. There's no drip, no spatter, no waste—every bit slowly consumed in useful work.

It will save your time, save your machinery, and save in the cost of lubricant.

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I want to try Albany Grease—Send me a Sample.
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708-710 Washington St. New York



No. 6 Little Giant Precision Grinder on internal grinding work at the plant of Ireland and Matthews, Detroit, Michigan

# *Accurate Grinding with Precision Grinders*

LITTLE Giant Electric Precision Grinders, designed for lathe use, are easily attached to the tool post in position for accurate grinding of outside and inside diameters. Especially adapted to tool room requirements.

The center of the grinding arbor may be raised or lowered to the proper height by simply pushing the grinder forward or backward on the convex washer and tightening the clamp bolt. This permits the tool to be used on lathes as small as 16 inch swing and as large as 30 inch.

Interchangeable external and internal arbors give these grinders a wide range of usefulness. The cap screws securing the arbors to the grinder frame protrude very slightly beyond the arbor housing, which permits the emery wheel to be worn to minimum size and allows sufficient clearance for the grinder back of the tail stock of the lathe. This is a very important feature not found in most grinders of the tool post type.

The motors which are made in two sizes are of the universal type, that is, they will operate on either direct current or single phase alternating current of sixty cycles or less. These and other outstanding features have made Little Giant Electric Precision Grinders a success in the plant of Ireland and Matthews as well as many others. Their utility and economical operation can be applied to production work as well as in the tool room.

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*Sales and *Service Branches all over the World*

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EL-55




# Test this sheet packing

## —try it where others have failed

Pick the meanest sheet packing condition in your plant and try Service Sheet on it—that's the engineering way to prove facts.

Thousands of engineers have tested Service Sheet on almost everything from mercury vapor to molasses—and with this result:

*—that Service Sheet will stand up under more conditions, and stand up better, than any other sheet packing on the market.*

Service Sheet meets practically every sheet packing need of the average plant. It replaces numerous "special" styles, simplifying your packing stock, reducing the investment, preventing mistakes, and eliminating deterioration.

Service Sheet is so dense and resilient that it can be used half as thick as other packings—a direct saving of material.

And remember, Service Sheet is absolutely reliable as well as economical.

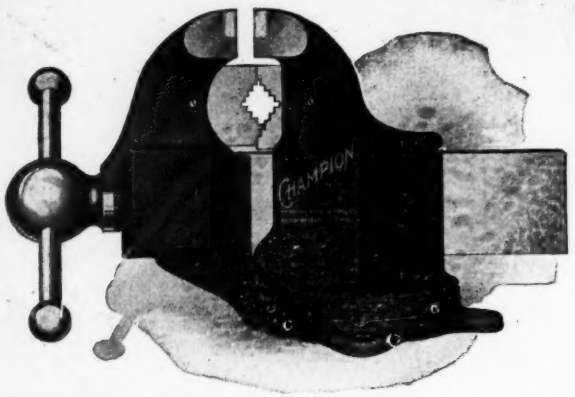
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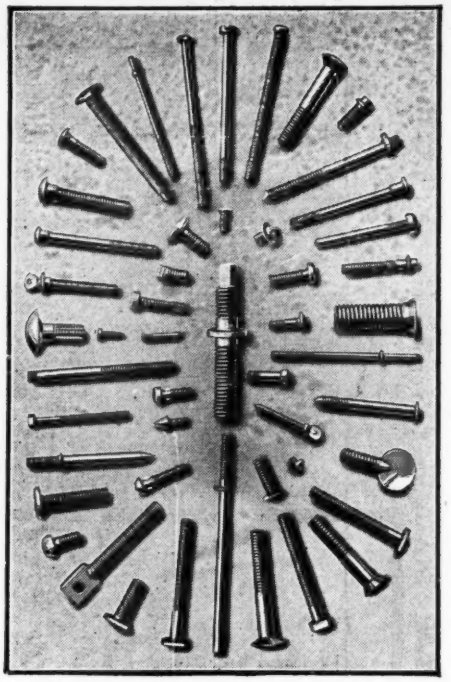
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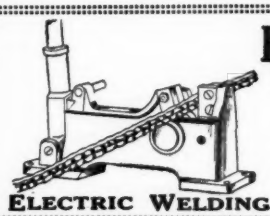
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Made entirely of Electric Steel
Weighs only 100 lbs.
Will cut any size up to
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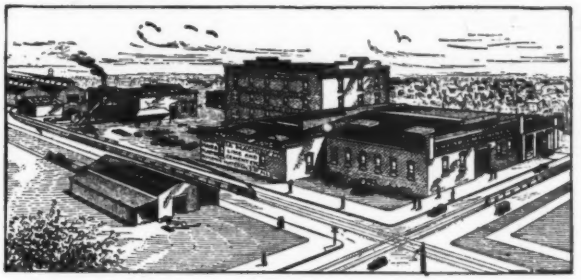
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SPECIAL ALLOYS

## TRUE SEMI-STEEL CASTINGS

**50% Steel—50% Cast Iron**

Are harder than gray iron.

Are 62% tougher than gray iron.

Are 80% stronger transversely than gray iron.

Are 100% greater in tensile strength than gray iron.

Last up to 45 times longer than gray iron.

Machine perfectly.

Polish like nickel.

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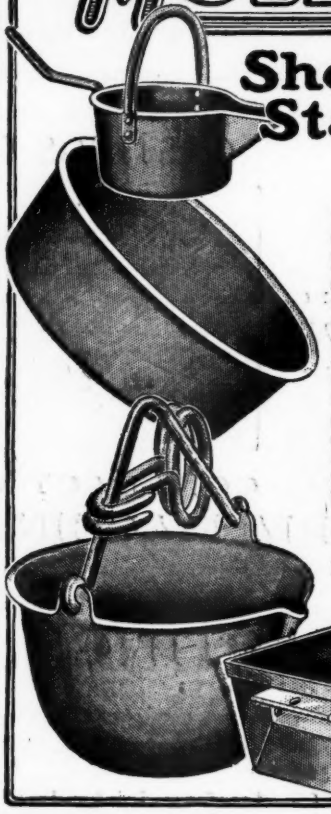
Contain that element that makes castings withstand heat and resist the stresses and strains of expanding and contracting without fire-cracking.

Castings to 30,000 pounds.

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***Standard For 40 Years***

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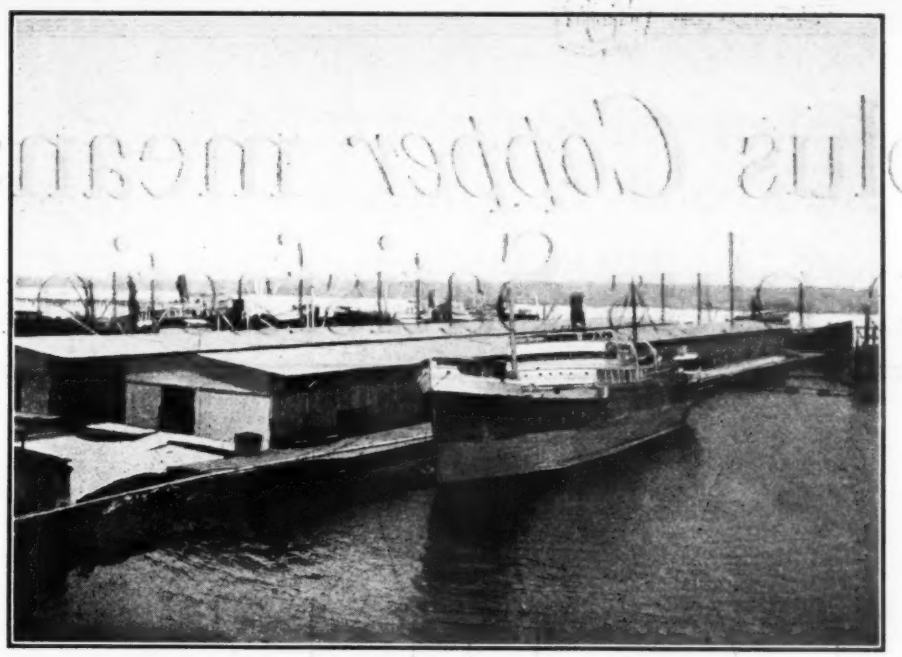
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*Warehouse, Municipal Dock Board, Jacksonville, Fla. Constructed in 1917 by Chesapeake Iron Co., Baltimore, Md.*

THE two warehouses shown in this photograph were constructed on the municipal docks at Jacksonville, Florida, in 1917. They are covered with ARMCO Ingot Iron roofing and siding.

This installation again typifies the long service given by ARMCO Ingot Iron, even when corrosive conditions are severe. In this particular case these warehouses are used principally for storing fertilizer, and there is practically no ventilation except through the large doors which are open only during loading and unloading operations.

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**Middletown, Ohio**

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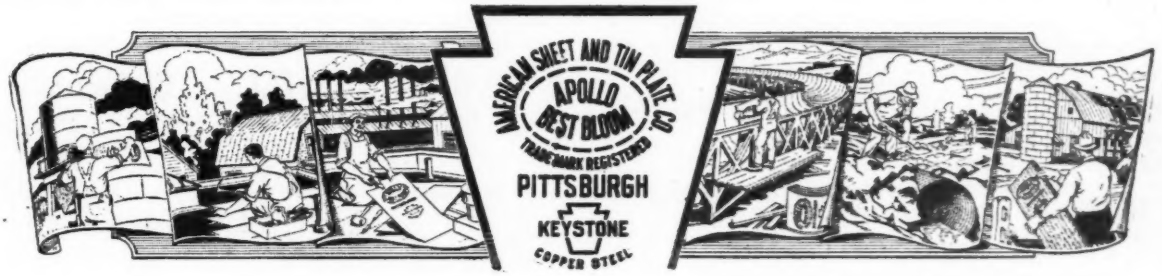
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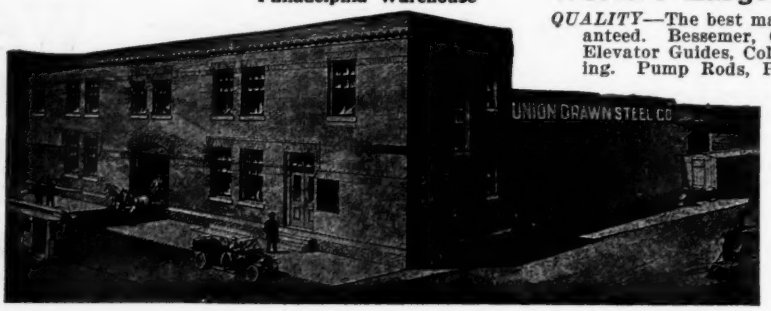
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**Sheet and Tin Mill Products for all purposes—Black Sheets, Galvanized Sheets, Tin and Terne Plates, Special Sheets for Stamping, Corrugated and Formed Roofing and Siding Materials, Electrical Sheets, Wellsville Polished Steel Sheets, Automobile Sheets in all grades, Deep Drawing Sheets, Stove and Range Sheets, Black Plate, Etc.**

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*QUALITY*—The best material, handled by expert workmen and always guaranteed. Bessemer, Open Hearth, Nickel, Chrome and Vanadium steel, Elevator Guides, Cold Die-Rolled Steel; also Turned and Polished Shafting. Pump Rods, Piston Rods, Roller Bearing Rods and Screw Steel.

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Immediate stock shipments from our warehouse in Birmingham and from other points throughout the South.

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NAILS, WIRE WALL PLUGS, WALL TIES.

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POL-HEX

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(PATENTED)

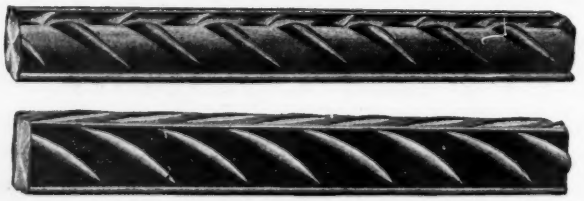
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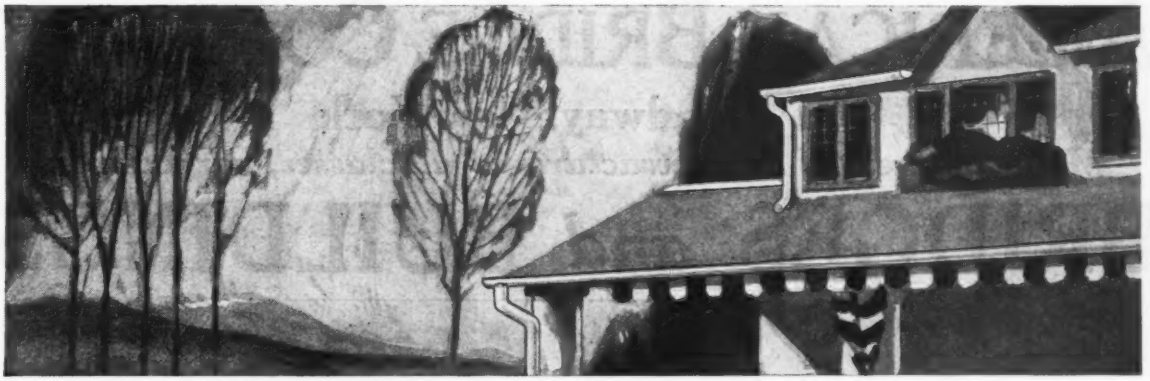
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EXPANSION JOINT CONCRETE SPECIALTIES
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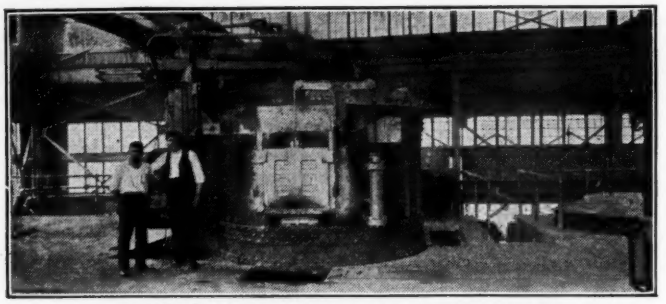
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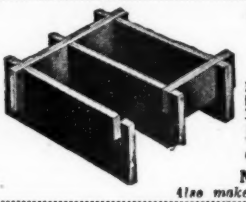
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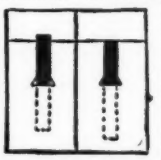
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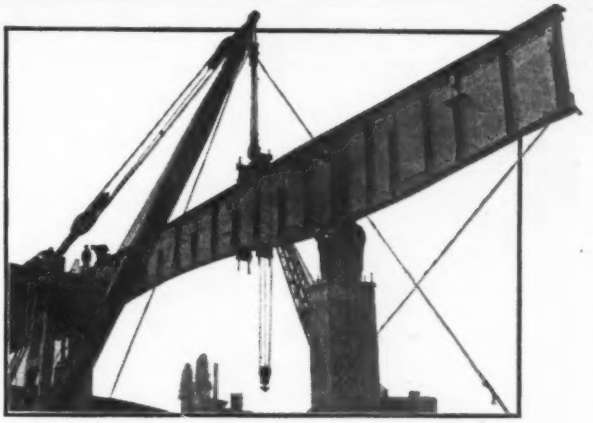
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A screen that *gives* out is expensive at any price. Screens that *wear* out in service are the only kind worth considering. For there is a vast difference between *giving* out and *wearing* out.

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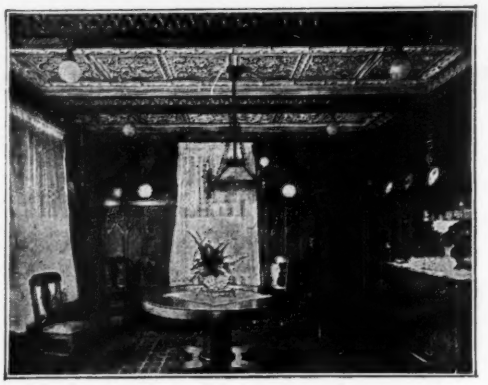
Consider the ordinary screen; the time and labor consumed in frequent changes, to say nothing of loss of production and multiplied frequency of screen purchases, and the low first cost seems insignificant in comparison with its drawbacks.

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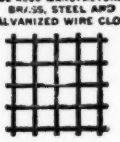
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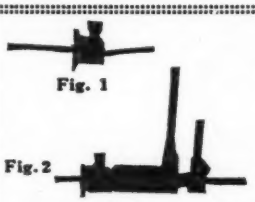
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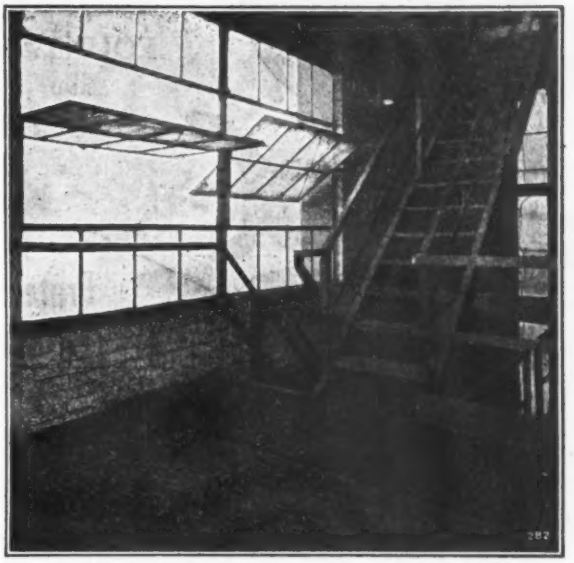
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**Protects those who drink**

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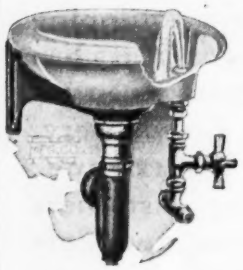
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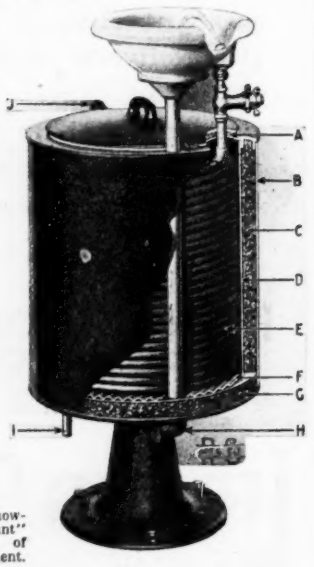
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for millwrights, painters, paperhangers, carpenters, plasterers, tinners and contractors.



Fig. 312
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Weight, 22 oz. each.

**Fig. 313**—Two Adjustable Scaffold Jacks
With four Iron Brackets as shown in Fig. 312.

***Scaffold Jacks, as above illustrated, are made in all sizes from 2 to 16 feet***

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The results were so satisfactory that Mr. Rittenhouse, Construction Manager, selected Master Builders materials for use in the New Statler Hotel at Buffalo. He writes:

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*"We used several of your other products in this building and they have all given uniform satisfaction. We can recommend them without qualification."*

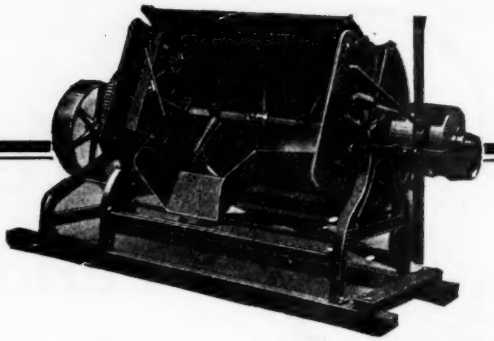
In the New Statler six million brick were laid with mortar using Master Mix and 227,000 square feet of Masterbuilt floors were installed.

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Factories in Cleveland and Irvington, N. J.
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# Masterbuilt Floors



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## Batch Mixers Are Enthusiastically Endorsed

The BLYSTONE is the only mixer that will successfully mix concrete, mortar, hard-wall or the old-fashioned hair plaster. Built of the best materials which can be obtained, and by skilled workmen.

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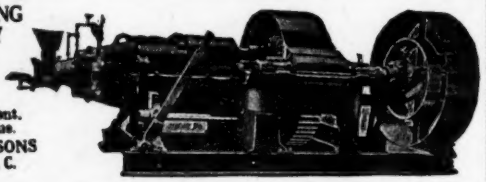
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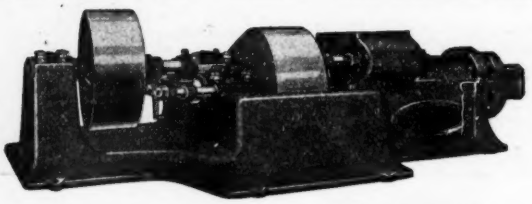
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## Brick and Tile Machinery

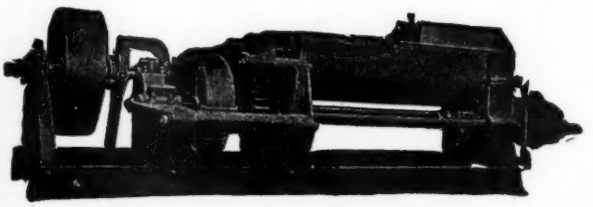


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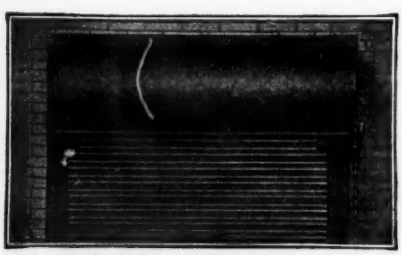
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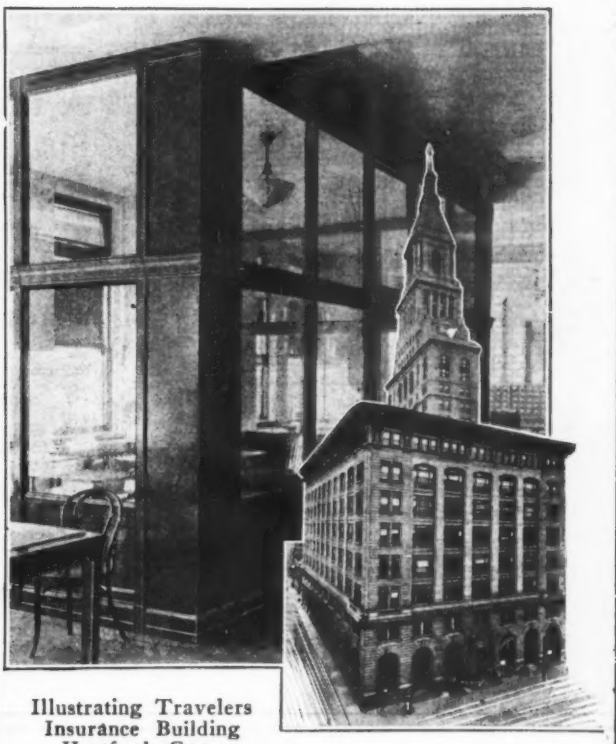
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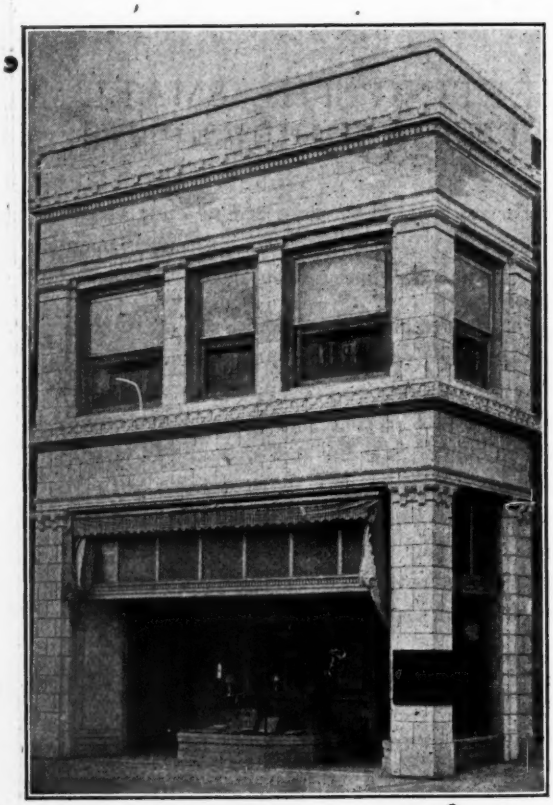


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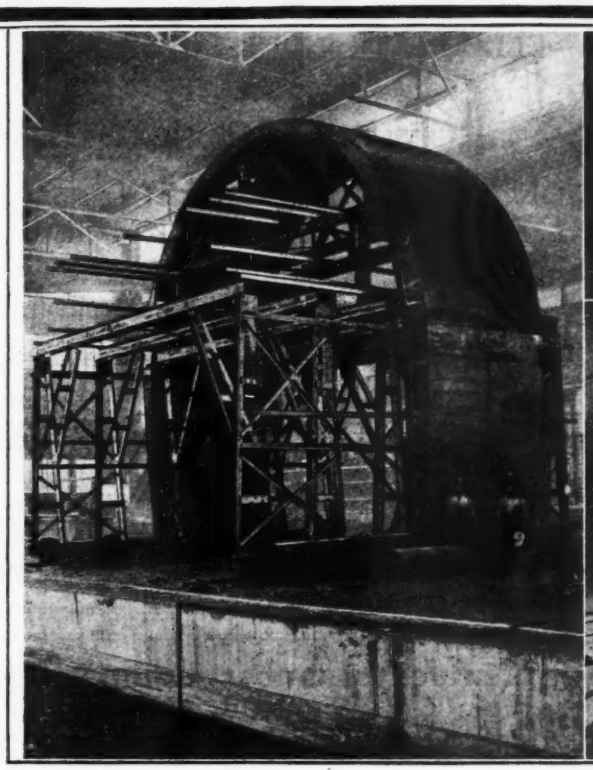
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*The Tunnel*

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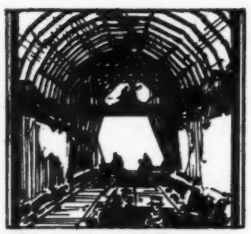
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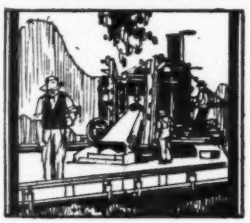
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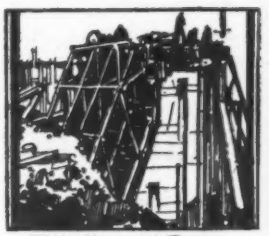
*Tunnels and Sewers*



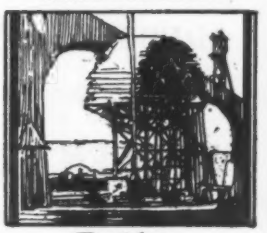
*Subways and Aqueducts*



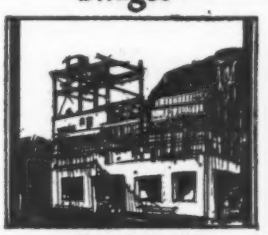
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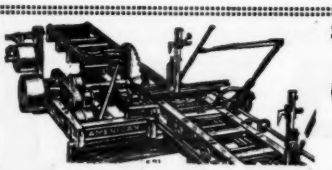
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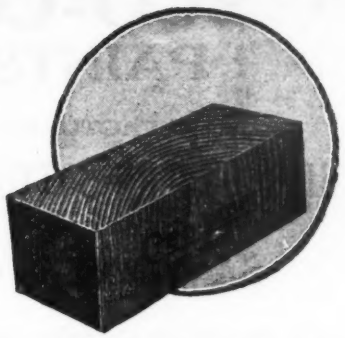
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So we have decided to stay right here in little Old Coatesville, where our friends and loved ones are, and keep right on making these wonderful elevators for the 5,000 and more concerns.

Who, when they have an elevator proposition rarely fail to

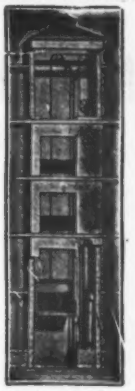
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**Passenger and All Types Freight Elevators**

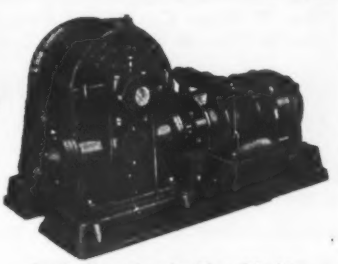
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**ELEVATORS**

***The Westbrook is the result of careful study and tests of competent engineers.***



Single Wrap Traction Type Machine

**FOR PASSENGER AND FREIGHT SERVICE**

**WESTBROOK ELEVATOR MANUFACTURING CO., Inc.**

**DANVILLE, VIRGINIA**

# AMERICAN ELEVATORS

*Built by*

## AMERICAN ELEVATOR and MACHINE CO.

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LOUISVILLE, KY.

"Reason — cold, calculating, unimpassioned reason—must furnish all the materials for our future support and defense. Let those materials be molded into general intelligence, sound morality, and, in particular, a reverence for the Constitution and laws.

*Abraham Lincoln.*

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**116 East 24th Street, New York City**

No. 39

*Space for this advertisement donated to the Society*

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**Superior to All; Reds, Browns, Buff, Black**

**Samples on Application**

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**Chattanooga, Tenn.**

**Standard for nearly half a century.**

**Passenger and Freight**

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**(Established 1881)**

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**BIRMINGHAM, ALA.**

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Foundries and Home Office:
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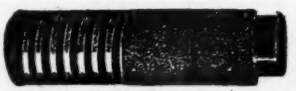
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## Hammond-Byrd Iron Co.
CAST IRON WATER PIPE AND FITTINGS
1707-1718 American Trust Bldg., Birmingham, Ala.
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## McWANE PRECALKED JOINT PIPE CAST IRON
Sizes 1¼-in. up. No bell holes.
Saves 20% Cost Line. Cat. M.
McWANE CAST IRON PIPE CO. Birmingham, Ala.

## P.I.W.
STEEL PLATE CONSTRUCTION

**RIVETED STEEL PIPE**
Smoke Stacks
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Caissons
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Oil Storage Tanks
Galvanizing Kettles
and all classes of Steel Plate Construction for the Iron and Steel Industry.
THE PETROLEUM IRON WORKS CO.
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Save 25% to 50% by using **Wyckoff Wood Pipe** instead of Cast Iron Pipe
Cheaper. Lasts as long. Delivers more water. Get catalogue
A. WYCKOFF & SON CO., ELMIRA, N. Y.
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**STANDARD WOOD PIPE**
MORE DURABLE AND ECONOMICAL
Will furnish pipe to suit conditions Write for catalogue for full informatio
STANDARD WOOD PIPE COMPANY - - WILLIAMSPORT, PA.

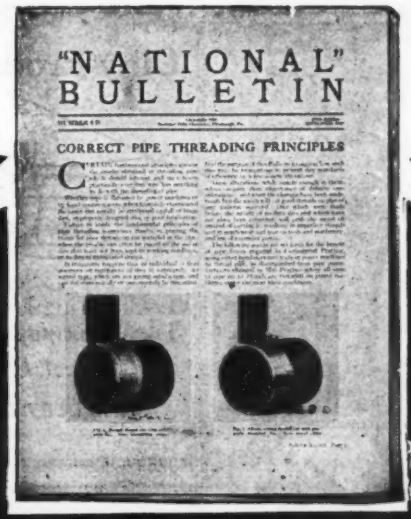
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FLEXIBLE JOINTS
COLDWELL-WILCOX COMPANY
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GENERAL FOUNDERS AND MACHINISTS
Manufacturers of
**CAST IRON PIPE**
For Water and Gas, Flange Pipe and Fittings




TAYLOR'S SPIRAL RIVETED PIPE is furnished with FORGED STEEL FLANGES attached. These flanges expand evenly with the pipe, and cannot be broken by any possible condition that may arise in the piping system.
SHEET STEEL FITTINGS are made to your special designs to meet the most unusual conditions, eliminating heavy castings, and making the piping system wrought steel throughout.

**AMERICAN SPIRAL PIPE WORKS**
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# *A valuable Bulletin for all who thread pipe either by machine or by hand methods*

*20 pages*
*29 illustrations*

## *Free on request*

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**NATIONAL TUBE COMPANY, PITTSBURGH, PA.**

Please send me a copy of "National" Bulletin No. 6—
CORRECT PIPE THREADING PRINCIPLES

Name ..... Address .....

Occupation ..... .....



## *Is There Anyone Who Can't Afford "Reading"?*

WHEN the damp, dark stains appear on ceiling or walls and spread and spread and spread, you know it means a hurry call for the plumber. Somewhere within those walls a pipe has given way, perhaps only a pinhole opening at first but bound to spread havoc.

Not until that happens can you realize what inferior pipe means. True, the pipe replacement cost would mean nothing more than the price of a few gallons of gas. But the ripping up of hardwood floors, the pounding out of plaster and lath, the tearing away of wall paper which can never be rematched—that's what eats the hole in your pocketbook.

We may be speaking of a towering skyscraper or a modest bungalow. It doesn't matter because it happens to both when inferior pipe for plumbing and heating is used. That's why we say, *"You can't afford not to use Reading Genuine Wrought Iron Pipe."*

Reading Pipe, being made of genuine wrought iron, has rust-resisting qualities that do not exist in steel pipe and because of those qualities it lasts two to three times longer. Of course, it costs a little more, perhaps adds 10% to the piping bill, but you'd pay many times its cost if you'd ever gone through the chaos and expense of replacing defective piping. Reading Pipe will give perfect service as long as the building stands while disaster may overtake inferior pipe any day or hour. Good architects will give you the same advice but if you want more information from us write for a copy of "The Ultimate Cost." It gives pipe and installation costs in an interesting manner.

EST. READING 1848

**READING IRON COMPANY**
**READING, PENNA.**

*World's Largest Makers of Genuine Wrought Iron Pipe*

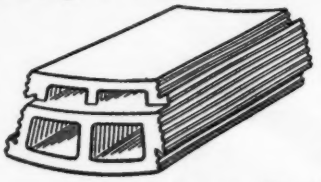
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**GUARANTEED GENUINE**
# WROUGHT IRON PIPE



1871 1923

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For the last HALF CENTURY we have been the largest Manufacturers in the South of Vitrified Sewer Pipe, Vitrified Highway Culvert Pipe, Segment Blocks, Hollow Tile, Septic Tanks, Flue Lining, Wall Coping, Tile Silos, Drain Tile, Chimney Tops.

*Ask for free Booklets and prices.*

**Chattanooga Sewer Pipe Works**
**Chattanooga, Tenn.**



## CAST IRON PIPE
~ AND FITTINGS ~
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Birmingham, Ala.
SALES OFFICES IN PRINCIPAL CITIES



## UNIVERSAL CAST IRON PIPE

THE CENTRAL FOUNDRY COMPANY
41 East 42d St., NEW YORK
Chicago Birmingham Dallas San Francisco

*no packing no calking no bell holes*



**"PIPE SPECIALISTS FOR FORTY-EIGHT YEARS"**

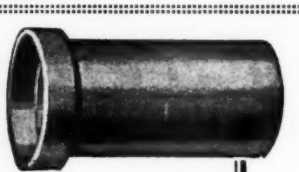



## ROOT WATER TUBE BOILERS SPIRAL RIVETED PIPE

**ABENDROTH & ROOT MANUFACTURING CO.**

Works—Newburgh, N. Y New York Office—Woolworth Building, 233 Broadway





**ALSO**
Flue Lining
Wall Coping
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Septic Tanks
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## SEWER PIPE

OF QUALITY

Made of Ohio River Fire Clay.

By test 43% stronger than competitors'. Send for Special Test Circular.

**Cannelton Sewer Pipe Co.**
CANNELTON, IND.
SOUTHERN DISTRIBUTOR:
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# PUMPS

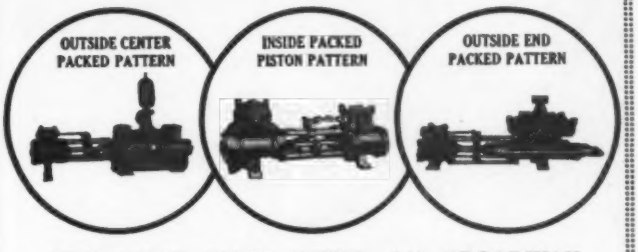
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THE GOULDS MANUFACTURING COMPANY
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## DURABLE DUPLEX STEAM PUMPS




NEW YORK SALES OFFICE, 141 BROADWAY
Send for Catalog No. 107

DEAN BROS. CO. INDIANAPOLIS.

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## CENTRIFUGAL PUMPS
For Every Service

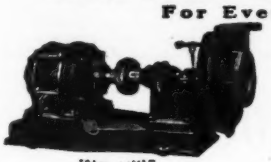


Fig. 287
SINGLE SUCTION WATER PUMP

SAND PUMPS
ACID PUMPS
MINE PUMPS
SEWAGE PUMPS
FIRE PUMPS
BOILER FEED PUMPS



Fig. 289
ENGINE DRIVEN CONTRACTORS PUMP

BELT, MOTOR AND ENGINE DRIVE

ERIE PUMP AND ENGINE WORKS
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WELL WATER - SUPPLY GUARANTEED

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LIFT 10' TO 1000'

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Keystone Well Drills are dependable tools for Water, Oil and Gas Wells, Mineral Prospecting, Blast Hole Drilling. Portable and Traction Drills for all depths, 25 to 3000 ft.—Steam, Gas Motor or Electric Power.

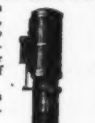


A catalog and price list of Well Drilling Rigs and Equipment, Bits, Sreme, Jars, Rope, Sockets, Fishing Tools, Etc., will be sent on request.

DOWNIE
DEEP WELL PUMPS

Downie Deep Well Pumps are offered for Heavy, Continuous Service in Deep Artesian Wells. They are built in Double and Single Stroke Models and may be Steam Driven, Belted, Direct Geared to Motor, or equipped for any other standard form of drive.
Smaller Pumps for lighter service.
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Downie Centrifugals, single and multi-stage, Catalog 801.

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## MYERS Honor-Bilt

Claims for superiority of product are worthless unless substantiated by the service giving qualities of the product itself. The thousands of MYERS POWER PUMPS and WORKING HEADS installed and in use under every conceivable pumping condititon are a testimony of their ability to satisfactorily perform the pumping duties assigned to them while our yearly production of nearly 25,000 power pumps is in itself proof that they give excellent service to users.

If you contemplate the installation of one or more Hand or Power Pumps for any service, write us for a copy of our catalog before you make a decision.

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## POWER PUMPS

## DAVIS FOUNDRY & MACHINE WORKS
ROME, GEORGIA

Manufac urers of The Davis Turbine Water Wheel, Vertical and Horizontal, Shafting, Pulleys, Gearing, Etc.

GENERAL FOUNDRY AND MACHINE WORK

SYDNOR'S SUPREME SERVICE

## WELL DRILLING
AND DEEP WELL PUMPS

We have a Very Efficient System of Pumping that we wish to tell you about. Write for Catalog M.

SYDNOR PUMP & WELL CO., Inc., Richmond, Va.

H.S.W.D.CO. CONTRACTORS — SKILLED-WELL WORK-WELL DONE BY WELL MEN

Established 1885

# WELLS

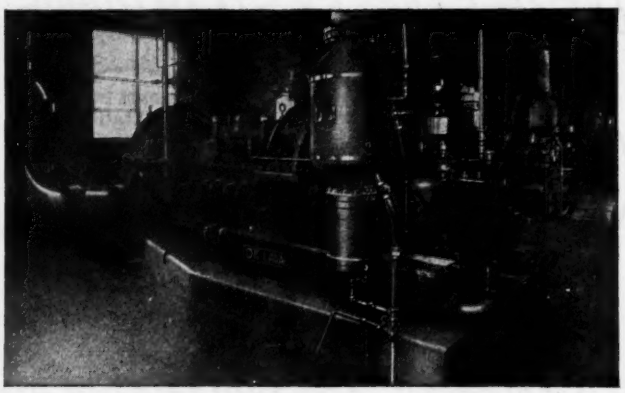
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WELL DRILLING CO.

CHARLESTON ATLANTA

## ARTESIAN WELLS

ANY SIZE ANY DEPTH
DRILLED ANYWHERE

VIRGINIA MACHINERY & WELL COMPANY, Inc.
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# Modern Pumping Equipment

THE advantages of the centrifugal pump over the reciprocating pump for general water service include:

(1) Entire absence of valves and reciprocating parts,
(2) No rubbing parts except the ring-oiled bearings,
(3) No shock or vibration, and
(4) No danger of over-pressure or racing.

The turbine, like the pump, is the extreme of simplicity and reliability as compared with the reciprocating engine, being free from valves, sliding surfaces, numerous adjustments, reciprocating masses and lubrication difficulties. The use of a speed reducing gear permits both turbine and pump to run at the best speeds for efficiency.

In the large chemical plant in which the accompanying photograph was taken, five De Laval geared turbine driven centrifugal pumps, one rated at 14,000 g.p.m. and the other four at 8,400 g.p.m. each, all against 198 ft. head, are installed.

Geared turbine-driven centrifugal pumps give the lowest overall cost of handling water. The steam consumption is practically the same as that of the best triple expansion pumping engines, while the first cost of machinery, foundations and buildings is much less.

De Laval turbine driven centrifugal pumps are built in all capacities and for all heads.

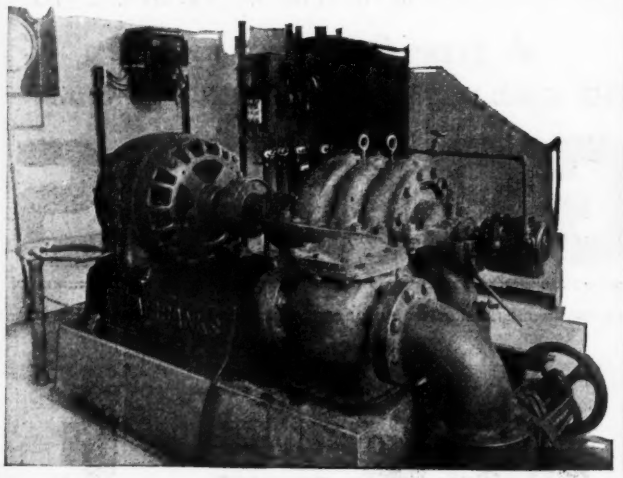
State requirements so that our Engineering Department can advise and submit estimates. *Ask for special publication B-91.*

**De Laval**
**Steam Turbine Co.**
**Trenton, New Jersey**

Local Offices:—Atlanta, Birmingham, Boston, Charlotte, Chicago, Cleveland, Dallas, Denver, Duluth, Indianapolis, Kansas City, Los Angeles, Montreal, New York, New Orleans, Philadelphia, Pittsburgh, Salt Lake City, San Francisco, Seattle, Toronto.

350

# FAIRBANKS-MORSE PUMPS



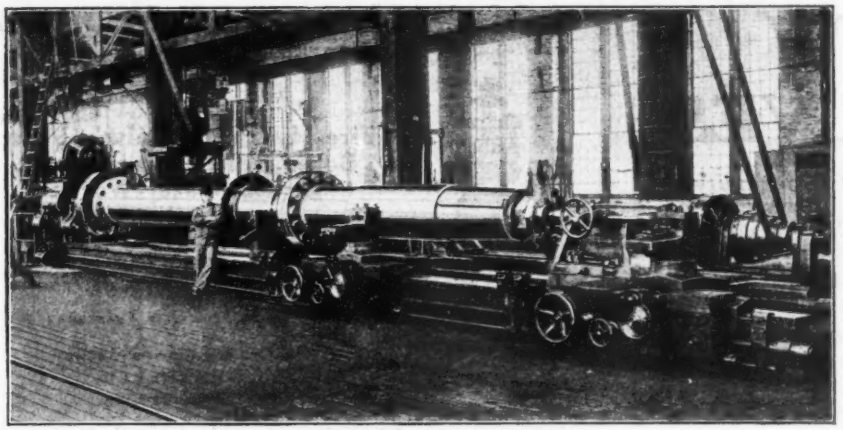
## ECONOMIZE FLOOR SPACE

The Fairbanks-Morse three inch Multi-Stage centrifugal pump direct connected to a Fairbanks-Morse slip ring motor furnishes the city of Portland, Oregon, with 350 gallons of water per minute at a head of 350 feet doing the work of an 8 x 10 Triflex pump and saving three-fourths of the floor space.

The horizontal split-casing centrifugal pump is the ideal installation for booster plants on account of its high efficiency and the ease of access to parts without disturbing the pipe connections. Chemical plants, factories, hotels, mills, municipalities, office and apartment buildings, find the Fairbanks-Morse centrifugal economical, reliable and dependable.

***ONE MANUFACTURER***
***ONE RESPONSIBILITY***

**FAIRBANKS, MORSE & CO.**
*Manufacturers* Chicago



## First Cost Unimportant Results Count

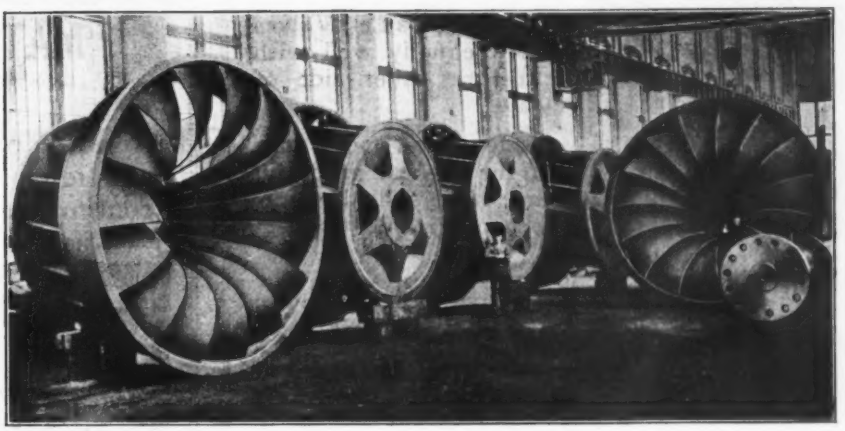
*In considering the Development of Water Power, install*

**SMITH HYDRAULIC TURBINES**

*For what they will do*
*For the service they will render*
*For the years they will last*

BULLETIN "M" DESCRIBES MANY SATISFACTORY INSTALLATIONS

Accompanying views show turbine shaft 26" dia., 35'0" long, weight 57,000 lbs., receiving finishing cut in lathe; also 5 of 7 turbine runners on single contract, total capacity 175,000 H. P. 80 ft. head. Weight 80,000 lbs. each.

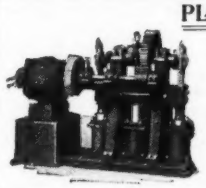


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PLATT IRON WORKS – DAYTON, OHIO.



Smith-Vaile PLATT Pumps

STEAM and POWER PUMPING MACHINERY

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# MORRIS since 1864

CENTRIFUGAL PUMP

Since 1864 Morris has been building Centrifugal Pumps, Hydraulic Dredges and Steam Engines. You can depend upon the Morris reputation.

**Morris Machine Works, Baldwinsville, N. Y.**
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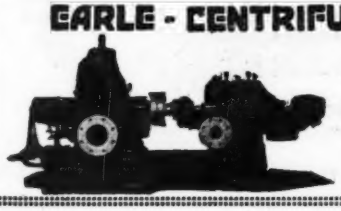
**Pumps** **Aurora** **Pumps**
Centrifugals

Horizontal and Vertical split open and Enclosed Impeller types. Deep well turbine centrifugals. Deep well power Heads.

**Aurora Pump & Mfg. Co., Aurora, Ill.**

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## EARLE - CENTRIFUGAL - PUMPS

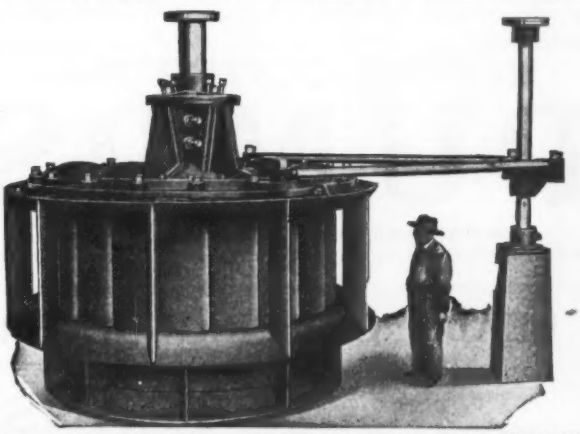


For all purposes where Centrifugal Pumps of the better class are adapted

**The Earle Gear & Mach. Co.**
Philadelphia, Pa., U. S. A.

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## TURBINE WATER WHEELS



**HIGH SPEEDS, HIGH POWERS, HIGH EFFICIENCES**

"All of our turbines are designed and built to suit location and requirements, by engineers and experts who have had years of experience in this particular line of work.
We fully guarantee our Turbines and results developed.

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*Their simplicity is a mark of superiority*



The interial mechanism of Ludlow Double Gate Valves consists of two gates and two bevelled faced wedges. The wedges are entirely independent of the gates —working between them.

Ludlow Gate Valves work equally well with pressure either side of Gate.

Made of iron and bronze of the highest grade by the most skilled workmen obtainable.

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**Fire Hydrants, Valves, Valve Boxes, Sluice Gates, Meter Boxes, Water-Works Supplies**

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## FIRE HYDRANTS

were the pioneer Hydrants in the South, and today, after more than fifty years, continue to hold first place in the Water Works Field.

**R. D. WOOD & CO.**
ESTABLISHED 1803
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McGOWAN DUPLEX STEAM AND POWER DRIVEN PUMPS

*Built under rigid inspection*

THE JOHN H. McGOWAN CO.
CINCINNATI, OHIO, U.S.A.

**THE BOURBON COPPER & BRASS WORKS CO.**
*Manufacturers of*



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# RoTURBo CENTRIFUGAL PUMPS

Manistee Iron Works Co., Manistee, Michigan

# PUMPS AIR COMPRESSORS

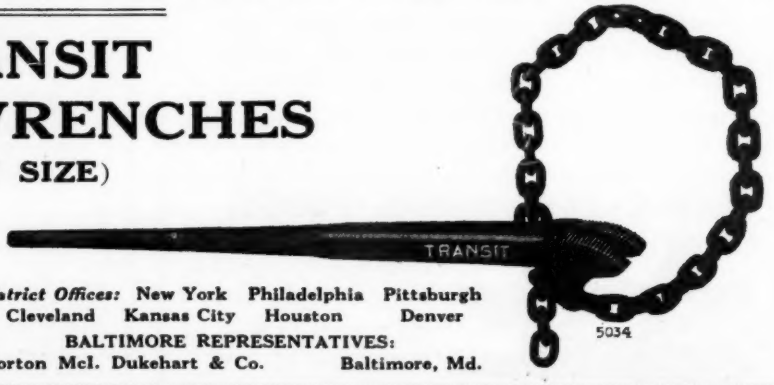
Backed by The Pennsylvania Guarantee

Pennsylvania Pump & Compressor Co.
EASTON, PENNA.

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# TRANSIT CHAIN WRENCHES
**(ANY SIZE)**

*Send for Bulletin 5-C*
*"Tools for Pipe Line Construction"*




**NATIONAL TRANSIT**
Pump and Machine Company
OIL CITY, PA.

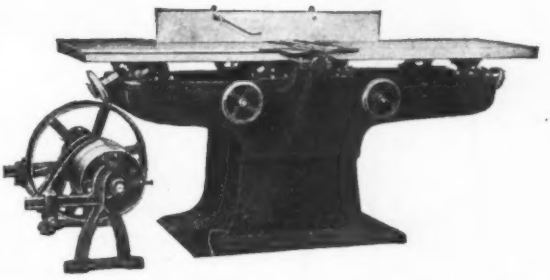
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BALTIMORE REPRESENTATIVES:
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The Silver line of high grade machinery is adapted not only to rough work but for rapid, accurate and reliable results on fine work in hardwood for cabinet and pattern work, interior finish, etc.

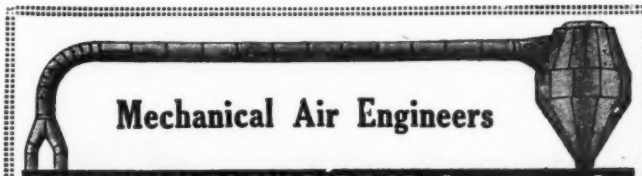
Machines are strong, carefully designed in all details.

Write for complete list and description of our full line of woodworking machinery which includes jointers, saw tables, band saws and swing saws.



**SILVER MANUFACTURING COMPANY, Box 365, SALEM, OHIO**

*ESTABLISHED 1854*



**Mechanical Air Engineers**

**SAVANNAH BLOW PIPE CO., SAVANNAH, GA.**

**ALLIS-CHALMERS MFG. CO.**

MILWAUKEE, WIS., U. S. A.

DESIGNERS AND BUILDERS OF

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By installing an **ECO WATCHMAN'S CLOCK SYSTEM** unfriendly visitors will not pass without first encountering the night watchman. Fires will be discovered in their incipiency. You can go home in peace and know that your watchman is watching your property as you expected he would when you engaged him.

**ECO WATCHMAN'S CLOCKS** mean real protection and peace of mind to the users.

**ECO CLOCK COMPANY**

*"Quality Paramount"*

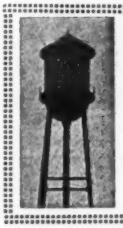
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**SEPTIK TANK CO.**

*Manufacturers and Engineers*

SEPTIK TANKS AND SEWAGE DISPOSAL PLANTS

Wilmington, N. C.



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**Serve all Industries and Municipalities**

SPRINKLER — OIL — MOLASSES — WATER SUPPLY

**CHICAGO BRIDGE & IRON WORKS**

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50

# TANKS

Stacks, Breechings, Kilns, Etc.
Oil Refinery and Chemical Equipment.
General Steel Plate Construction. Manheads and Saddles.

**NEW YORK CENTRAL IRON WORKS CO. INC.**

MIDDLEBURG AVENUE - HAGERSTOWN, MARYLAND

*SOUTHERN SALES OFFICE - REAL ESTATE TRUST CO. BLDG., GREENSBORO, N.C.*

NEW YORK PHILADELPHIA BALTIMORE BOSTON

**Hamburg Pneumatic Tanks For Pneumatic Water Systems**

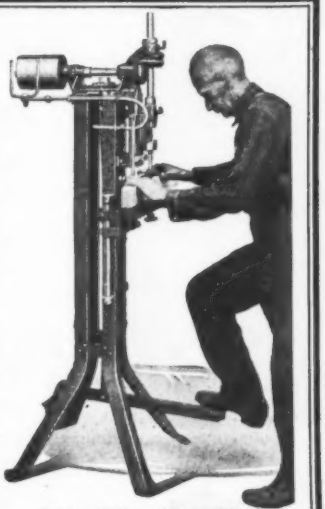
Sizes in stock for immediate shipment, Black and Galvanized.
Vertical Tappings—30"x6', 36"x6', Horizontal Tappings—30"x8', 30"x8', 30"x10', 36"x6', 36"x8', 36"x10', 36"x12', 42"x8', 42"x10', 42"x12', 42"x14'.

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HAMBURG, BERKS COUNTY, PENNA.

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ALMOST every job you do you need a Parks Mortiser and Borer. Handiest machine in the shop. A high-grade, guaranteed machine that will last your lifetime.

Makes mortises any size by repeating the cut, and up to three inches deep in one cut. Bed plate adjustable up and down and tilts to 45 degree angle.

Built for fast, accurate work. Adjustable to compensate for wear. Strong, rigid, electric-welded frame. 1 H. P. motor runs it.

Write for complete catalog of Parks Woodworkers describing this and other separate and combination machines.

**Parks Hollow Chisel Mortiser and Borer**

Guaranteed 10 years

**$90**

*f. o. b. Cincinnati*

**The Parks Ball Bearing Machine Company**

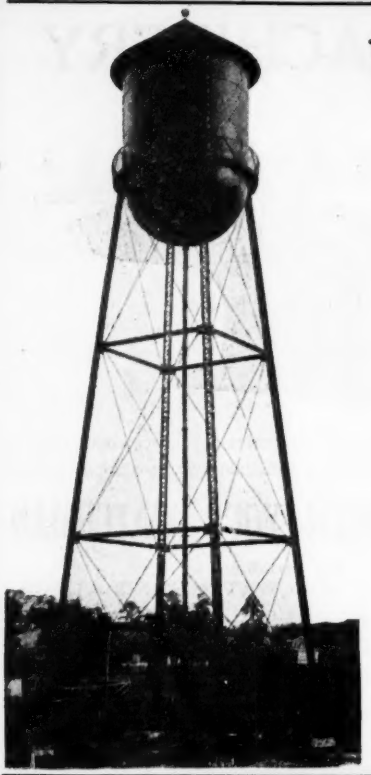
1544 Knowlton Street Cincinnati, O.

*Canadian Factory:* 200 Notre Dame East, Montreal, Can.

7-23

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**WOODWORKING MACHINES**



# Water Towers—A Sign of Progress

When you see the tall bulk of a Pittsburgh-Des Moines Elevated Steel Water Tank rearing above the rest of the landscape in some busy little town or village, note it as a sign of progress.

The old hand-pumped wells and tin bath tubs give way to modern comfort and sanitation. Water in every house and business building, and at every corner a fire plug—guarantees of better, more comfortable, healthful and safer living conditions. Fire no longer terrorizes. People know that with the modern gravity flow water supply provided by the Pittsburgh-Des Moines Elevated Steel Tank there will always be plenty of water on hand, at full pressure, to halt the flames.

Our work includes the building of complete water works, including elevated steel tanks, power houses, pipe lines, filters, etc. Consult with out engineers about your problem, without obligation.

Write today for further details. Ask for Catalog No. 75.

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**875 Curry Bldg., Pittsburgh, Pa.**

Des Moines Chicago Richmond Detroit New York Dallas Denver San Francisco

PITTSBURGH DES MOINES TANKS TRADE MARK

PITTSBURGH DES MOINES



**Chattanooga Boiler & Tank Co.**

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If made of Steel, we make it
Tanks anywhere for any service.

**Steel Riveted Pipe**
**Standpipes**
**Tanks on Towers**

*We make dye tanks and also manufacture special work for chemical plants*

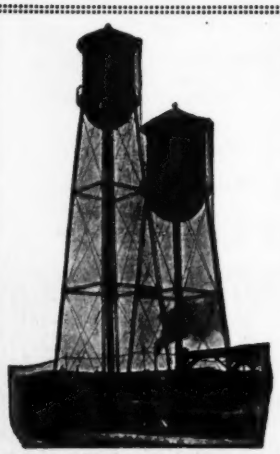
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*PITTSBURGH, PA.*

TANKS

STEEL TANKS—For pressure or plain storage—riveted, welded, or genuine copper-brazed construction—the tightest, strongest, safest tank it is possible to construct by any known process.



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WALSH & WEIDNER Towers and Tanks are correct in design. Their simplicity contributes to their low cost of maintenance.

Our shop equipment includes the best for production, and our facilities for quick shipment are unexcelled.

Our estimate on your next requirements will save you money.

**The Walsh & Weidner Boiler Co.**
CHATTANOOGA, TENN.



**STEEL TANKS and TOWERS**

**For Water Supply and Fire Protection**

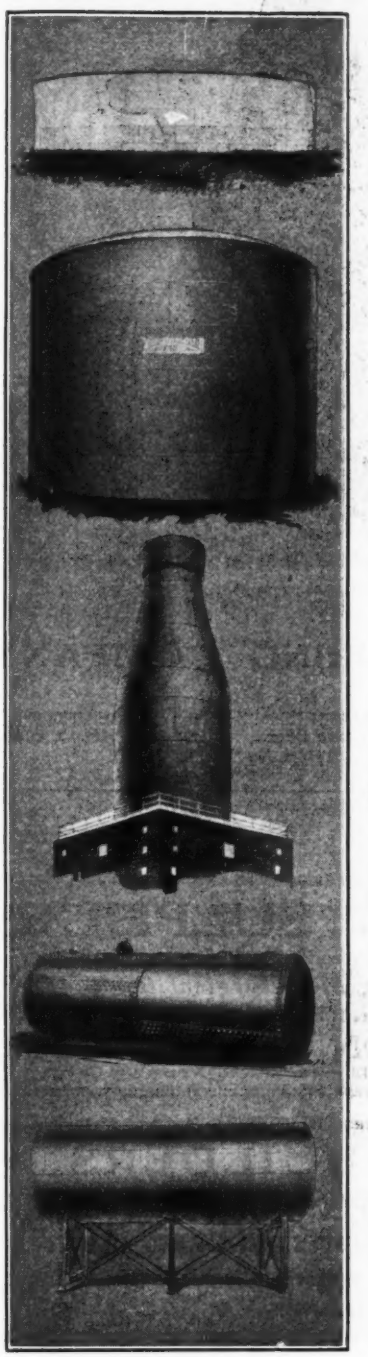
**ANY SIZE ERECTED ANYWHERE**

Manufacturers of
**BOILERS AND ENGINES**

*Write for prices*

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NEWNAN GEORGIA

Youngstown TANKS



# Industry



ONLY the highest type craftsmen are employed in the building of "Youngstown Tanks". We have no room for laggards or unskilled mechanics. We exact mechanical and engineering skill. We pay wages commensurate with this skill.

Each tank leaving our plant is triple inspected and tested. Before it is loaded on the freight cars we are first sure that it is right and that it deserves to bear the name of this company. Our workmen are happy in their knowledge that they are building a high class product.

**The Youngstown Boiler & Tank Co.**

J. P. Keane

President

**If you are interested in steel storage you will appreciate a copy of our latest Bulletin 500. Sent free to executives.**

No. 7 of a series of advertisements.

*The* **YOUNGSTOWN BOILER & TANK** *Company*
**Youngstown Ohio · · U.S.A.**

ENDURINGLY EFFICIENT

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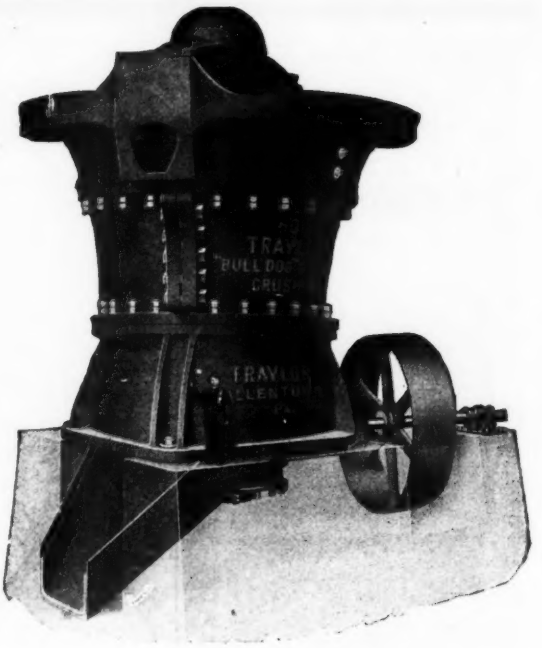
CONTINUOUS production is necessary if your plant is to pay a profit.

The Traylor BULLDOG Gyratory guarantees this because of its five patented and exclusive features.

Small sizes furnished in portable type for road work.

SEE OUR BULLETIN 100-M

THE GREATEST GYRATORY



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EXPORT DEPARTMENT, 104 Pearl St., New York City. Cable Address "Forsaltra"

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## Dings Magnetic Separators

for all separating, reducing, refining and sorting operations where materials are even slightly amenable to magnetism. Bulletins describe each type.

Dings Magnetic Separator Co., 624 Smith St., Milwaukee

## CRUDE SULPHUR

Guaranteed 99½% Pure

*For use in Metallurgical field, Fertilizer, Pulp, etc.*

THE UNION SULPHUR CO.
Frasch Building, 33 Rector Street, New York City

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MAKE VERY FEW FINES. CRUSH CLOSE TO SIZE DESIRED

Capacity 10 to 250 Tons per Hour

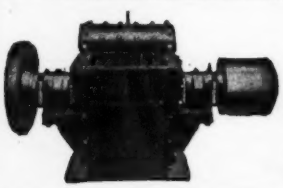
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EFFICIENCY ECONOMY DURABILITY
ROLL CORRUGATING A SPECIALTY

SALEM FOUNDRY AND MACHINE WORKS, INC.
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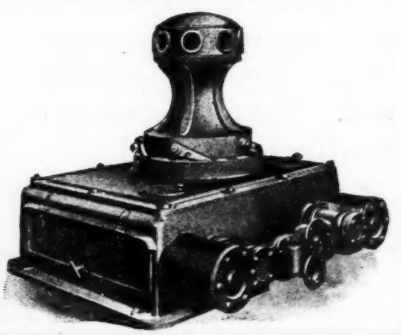
For crushing limestone for agricultural purposes, are simple, effective durable and trouble-proof. Write for illustrated bulletin giving prices, specifications and full particulars.

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## AUXILIARY DECK MACHINERY

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Well Built
Serviceable
All Parts Interchangeable
The "Built Right Run Right Line"



The Hadfield-Penfield Steel Company
Successor to
The American Clay Machinery Company
Bucyrus, Ohio

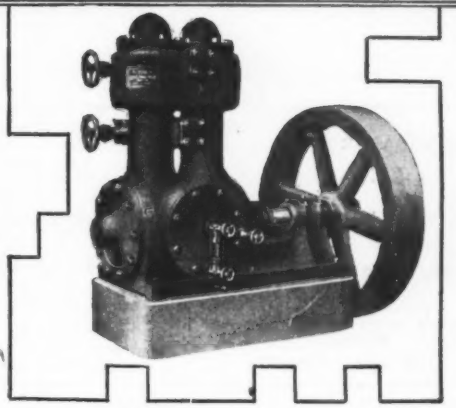
## Pulverizing Machinery Equipped with Air Separation for Reducing Any Material to a Powder

Our complete catalog giving valuable information on questions of grinding will be sent on request.

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# The Key That Unlocks the Door to INCREASED PROFITS



THOUSANDS of York Machines have paid for themselves, and are now earning substantial dividends for their owners. These machines are designed for service, built of the best materials for the purpose, thoroughly tested and rigidly inspected before shipment. They are self-contained, require very little attention and do not require a skilled operator. There is probably no other equipment you can buy that will be a greater help in increasing your profits than a York Refrigerating Machine.

**YORK MANUFACTURING COMPANY**
***Ice Making and Refrigerating Machinery Exclusively***
**YORK, PENNA.**

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The possible trouble makers in the way of swivels and chains have been eliminated in the damper control; the ventilator is better balanced and the shipping weight is reduced.

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**COLUMBUS OHIO**

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Detailed classification of specialized work undertaken by those having cards in this Directory will be found in Classified Index.

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Mem. Am. Soc. M. E.
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# DIRECTORY

**ARCHITECTS ENGINEERS CONTRACTORS** | **CHEMISTS GEOLOGISTS CHEMICAL ENGINEERS**

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Incorporated

Business Established 1894

**115 Broadway, New York**

Philadelphia Chicago San Francisco

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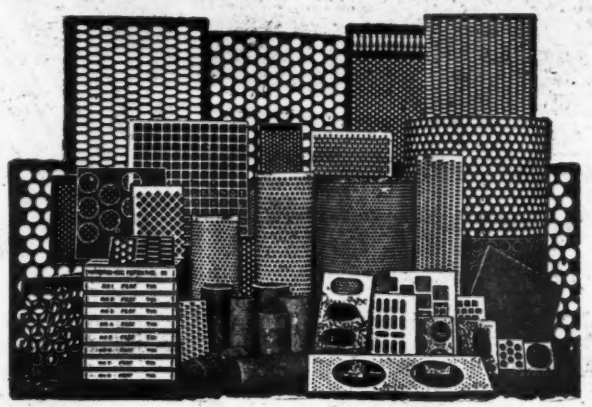
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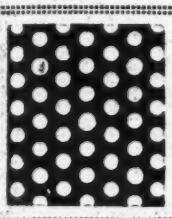
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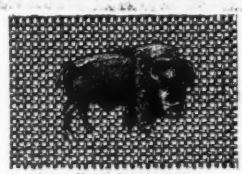
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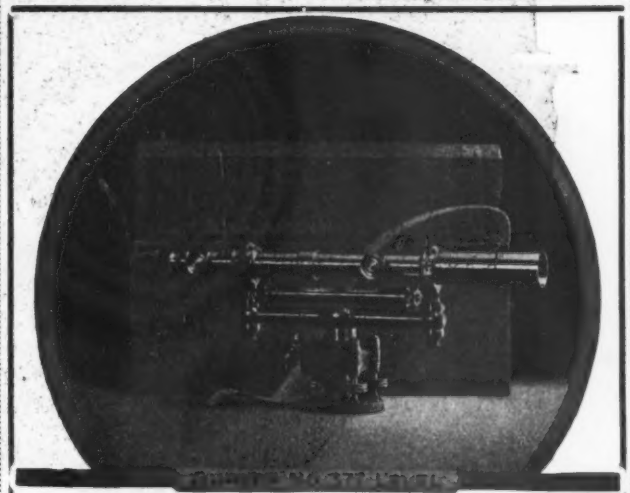


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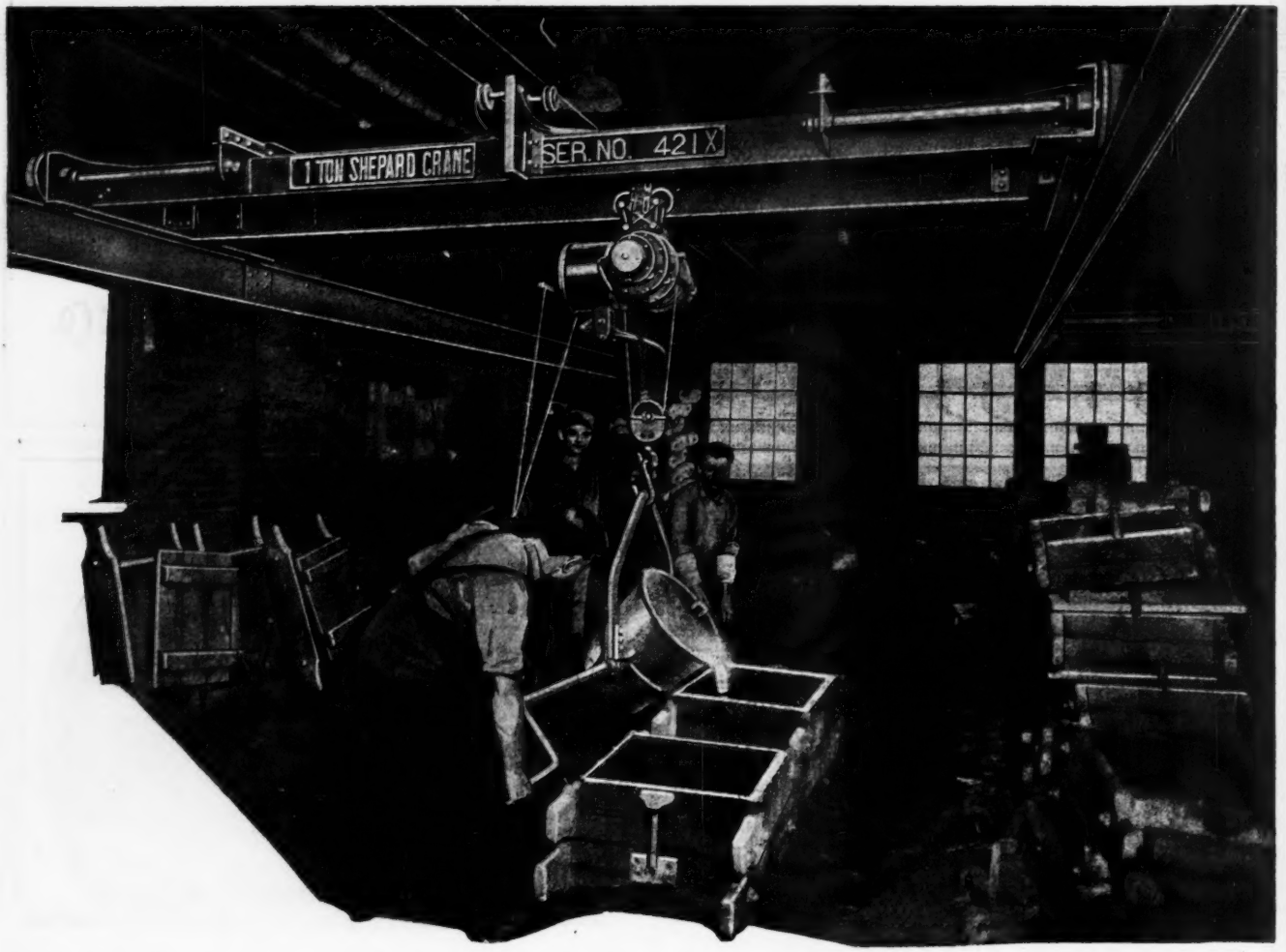
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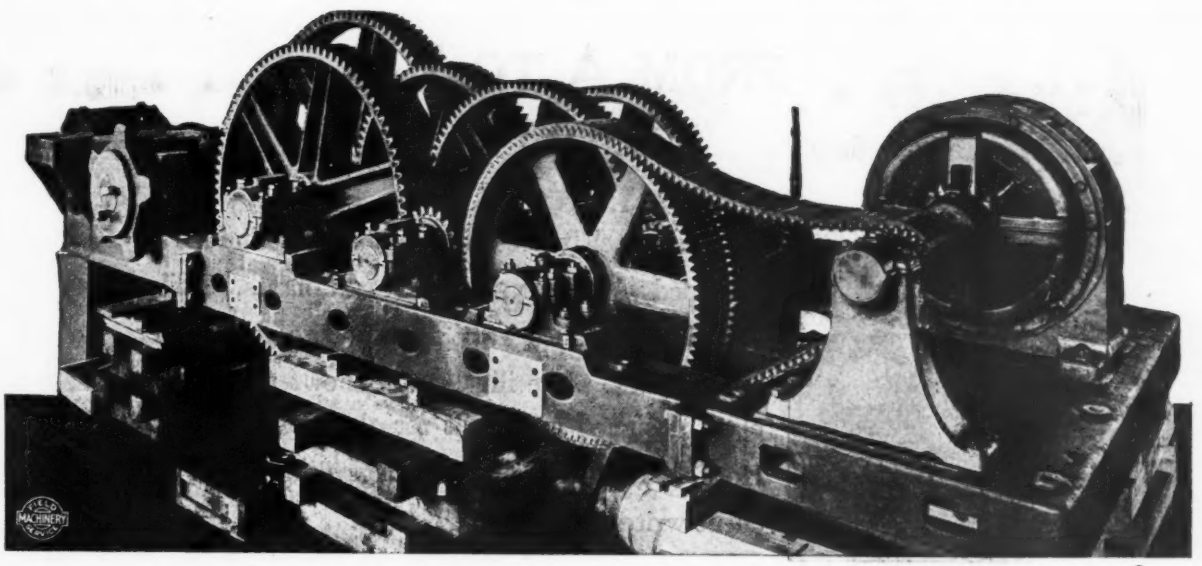
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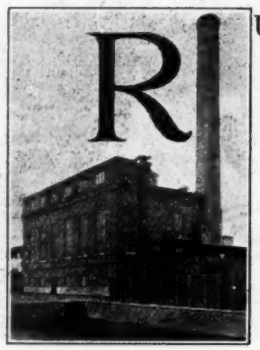
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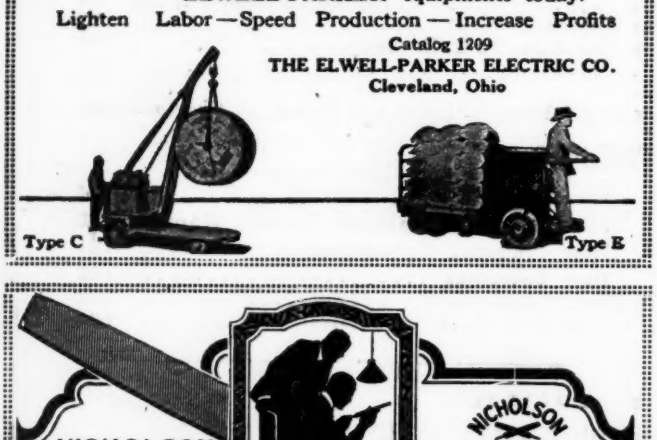
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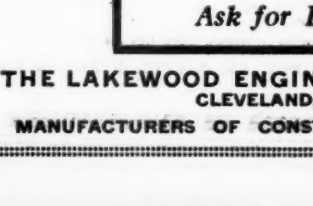


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# Manufacturers Record

EXPONENT OF AMERICA

Devoted to the Upbuilding of the Nation Through the Development of the South and Southwest as the Nation's Greatest Material Asset

Trade-Name Registered in the U. S. Patent Office

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## PERMANENTLY HIGHER COSTS.

IN a broad discussion of some business questions in America and Europe, C. W. Barron, who has just returned from abroad, writes of England with special relation to conditions now prevailing there. Mr. Barron gives many facts of interest in regard to the great department store and building operations of Selfridge, an American by birth, who during the last fourteen or fifteen years has won world-wide fame for his enormous department store activities in London. He is now expanding his building, and in discussing this Mr. Barron says:

**"No narrow vision guides the Selfridge enterprise. World conditions and especially financial conditions are studied before important forward steps are taken. The London City & Midland Banking interests advised Selfridge to build, although cost were 60 per cent more than before the war, as inflation was in the world to stay.**

"Selfridge's new construction, five stories, eighty feet high, and two basements, extending forty feet below, may cost only 45 cents per cubic foot, because the buildings already erected contain the elevator machinery. His first building cost, with elevators and machinery in 1909, only thirty-five cents per cubic foot."

The view expressed by the London City & Midland Banking interests in urging Mr. Selfridge to go on with his building operations, because inflation is worldwide and has come to stay, is, we believe, the judgment of the best financiers of the world. We are never likely to get back to the pre-war basis of wages or of costs of any kind. Here and there some one article may slip back into old prices, but broadly speaking the world has made a big advance. It has stepped on to a higher plane of employment, of wages, of the cost of materials in which wages are involved; and never again, unless civilization sinks back into barbarism, will we return to pre-war prices or pre-war wages.

## THE DRASTIC ACTION OF THE INTERSTATE COMMERCE COMMISSION IN PREVENTING A RAILROAD BRANCH LINE.

THE Interstate Commerce Commission in denying to the Virginian Railway the right to complete a short branch road of less than two miles to a proposed coal mine development said:

**"There are at present more mines in the country than is consistent with the most efficient use of carrier equipment, and their aggregate capacity exceeds greatly the country's demands."**

We cannot conceive by any stretch of power the right of the Interstate Commerce Commission to make such a statement as this as an argument against the right of the Virginian Railway to build a short branch road. No power has been granted to the Commission to decide whether there are too many coal mines in the country or too many industries of any kind. This is an assumption of authority which will inevitably bring the whole railroad question into most acute discussion, and cause the wisdom of such a statement to be attacked by every business interest in the country.

Shall a man be denied the right to open a coal mine when he owns the property and can find a market for the coal, merely because for the time being there may be a shortage in transportation?

Moreover, this short line of less than two miles would have resulted in the development of a 3000 acre tract of timber land. Shall the owner of that timber property be denied by the power of the Interstate Commerce Commission the right to secure a branch line over which to ship its lumber?

If the Interstate Commerce Commission has this authority, then it has power to practically destroy the value of every property of every kind.

The Interstate Commerce Commission will doubtless defend its position on the ground that the Transportation Act forbids the extension by the railways of their lines without first obtaining from the Commission a certificate that public convenience and necessity require such an extension; and that this law, and not the act of the Commission itself, is responsible for the refusal to permit the Virginian to extend its line, thus denying to the coal company the right to open its

property and denying to the timber company the right to cut its lumber.

We do not believe for one moment that the law was ever intended for such a purpose, nor do we believe that the Interstate Commerce Commission has by the broadest stretch of the interpretation of this law a right to express the view that there are more mines in the country than are needed, and that their aggregate capacity exceeds the country's demands.

There is more wheat in the country at the present time than is needed and the aggregate amount exceeds the demand for it, but shall the wheat grower be denied the right to open up a wheat field by a refusal to permit a railroad to build through a new wheat territory? If the Interstate Commerce Commission can say that there is too much coal mining capacity, it can with equal justice say that there is too much wheat growing capacity, and that the acreage in wheat is greater than the country needs, and that, therefore, no railroad must be permitted to build into new wheat territory.

The same condition would apply to every other industry, agricultural or industrial, and under such a tremendous autocratic power as that the country would be held in the thrall of a bureaucratic power so great that there would be no safety to any interest.

The practical denial to the coal company and to the lumber company to operate their properties is so revolutionary in character that if the courts sustain the position of the Interstate Commerce Commission then the safety of the business interests of this country should demand either the abolishment of the Commission entirely, or else such a complete change in the Transportation Act as to give no excuse whatever for any interpretation of this kind in the coming years.

The length of the projected line was less than two miles. The estimated cost was $63,012, of which $40,312 had already been expended in 1917 and 1919. This road is thus denied the privilege of making available a piece of road, two-thirds of the cost having already been spent.

The coal which would have been mined on this new property would have been very low in cost, the proposed operation being by one of the strongest companies in the country. This coal would have been shipped over a road which can carry a larger coal tonnage per train than any other road in existence; and that road had recently made a contract for electrification at a cost of about $15,000,000 in order to handle coal to still better advantage. The coal handled on that road is in part exported, but a large proportion of it is shipped to New England industries. The road was built primarily for the opening up of coal territory in order to carry coal directly to tidewater at Norfolk to be distributed from that point. It would seem that every possible facility should be given to coal land owners on that line to open up their property and by increased production lessen the cost. The argument that the opening of more mines increases the cost of coal to the public is not sound.

The railroads should be encouraged by the Interstate Commerce Commission to enlarge their coal handling facilities to the utmost extent possible, but no company owning coal land should be denied the privilege of opening up its mine at its own expense in order to find a market for its product. So long as coal is lying in the ground undeveloped it is in effect a dead asset. The company that is denied the privilege of opening its land by reason of any action of the Interstate Commerce Commission is robbed of its earning capacity, and thus of its property.

Whatever argument may be advanced by the Interstate Commerce Commission in defence of its position we feel absolutely certain that its action is unconstitutional, and would not be upheld by the Supreme Court.

This decision was rendered by a committee of four of the Commission and fortunately the Virginian Railway has appealed from the decision of the four members to the full board, and if it should fail to win its case before the full Commission it should carry the matter to the United States Supreme Court. The decision if of such vital importance that not a day should be lost in getting a reversal of this decision.

In the meantime it might be borne in mind that in the Transportation Act there is not, we believe, any possible interpretation which could deny to the coal company the right to build a short line of its own. We imagine that the coal and the timber companies owning the property which has been denied transportation facilities might jointly build a branch line of their own and connect it with the Virginian Railway. Under the law the railroad would then, we believe, be compelled to furnish cars to the timber and coal companies.

## ROLLED IRON AND STEEL OUTPUT INCREASED 79 PER CENT OVER 1921.

IN 1922 the production of all kinds of iron and steel rolled into finished forms was 26,452,004 gross tons, reports the American Iron and Steel Institute. This shows an increase of 11,677,998 tons, or 79.04 per cent, as compared with the 14,774,006 tons produced in 1921. In 1920 the United States produced 32,347,863 gross tons of rolled iron and steel; 25,101,544 tons in 1919, and 31,155,754 tons in 1918.

Twelve Southern States, in 1922, produced 2,189,666 gross tons of finished rolled iron and steel, an increase over the 1921 output of 991,643 tons, or about 83 per cent.

THE PRODUCTION OF ALL KINDS OF FINISHED ROLLED IRON AND STEEL, BY STATES, IN 1921 AND 1922, WAS AS FOLLOWS:

| States | 1921 Gross Tons | 1922 Gross Tons |
|---|---|---|
| Delaware, Virginia | 38,553 | 70,092 |
| Maryland | 107,164 | 338,954 |
| West Virginia | 367,577 | 615,175 |
| Kentucky, North Carolina, Tennessee, Georgia, Texas | 80,844 | 188,084 |
| Alabama | 551,405 | 853,401 |
| Missouri, Oklahoma | *52,480 | *123,960 |
| Total South | *1,198,023 | *2,189,666 |
| Maine, Massachusetts, Rhode Island, Connecticut | 109,497 | 163,953 |
| New York | 29,629 | 57,504 |
| New Jersey | 500,523 | 1,175,798 |
| Pennsylvania | 90,986 | 158,709 |
| Ohio | 6,103,790 | 10,771,157 |
| Indiana | 3,167,724 | 6,047,144 |
| Illinois | 2,050,567 | 3,073,772 |
| Michigan, Wisconsin, Minnesota | 1,127,482 | 2,006,965 |
| Colorado, Utah, Washington | 86,503 | 356,149 |
| California, Canal Zone | 220,122 | 315,304 |
| Grand Total | 89,160 | 135,883 |
| | 14,774,006 | 26,452,004 |

* Includes comparatively small production in Iowa.

## BUY YOUR COAL AND BUY IT QUICK.

PEOPLE who are financially able, even if necessary to stretch their resources, who have not laid in their winter's supply of coal must not complain next winter if they find themselves freezing again, as many of them did last winter. There is no assurance of an adequate supply of coal, especially of anthracite and indeed no certainty that full supply of bituminous coal will be at all times available. All consumers of coal for domestic or steam purpose as far as may be within their power should buy their coal and buy it now and have it delivered now and thus save themselves from much worry and possibly from much suffering next winter.

## A SOUTHERN BUSINESS MAN APPROVES NEGRO MIGRATION.

WRITING from Augusta, Ga., in regard to the movement of negroes from the South into the North and West, Mr. H. C. Middleton, a well known business man of that city, takes a very optimistic view, believing that this migration will be a benefit to the negroes and to the South.

Mr. Middleton's discussion of the subject is extremely interesting whether our readers may agree with him in all respects or not. The subject is one worthy of careful, broad discussion. With some of the points made by Mr. Middleton we are in hearty sympathy.

Years ago this paper took the position that Mr. Booker Washington was wrong in opposing the movement of negroes from the South into other sections. We said then that a fair movement would be helpful to the negroes themselves and to the South. Here and there some sections may be drained of labor by this migration, but we have no thought whatever that a sufficiently large number of negroes will leave the South to seriously halt its development either agriculturally or industrially.

Some 18 or 20 years ago the cry was heard throughout the South that labor was so scarce that Southern work could not be carried on properly. A number of the iron companies in Birmingham, hampered in their work by a shortage of labor, brought many Italians from the east and tried them for awhile. But the situation later on adjusted itself.

The discussion which is now going on is only a repetition of 20 years ago. The movement now will relatively be no larger than it was then, and as the negro moves out the South will learn more and more to turn its attention to the utilization of machinery to take the place of manual labor.

If out of the present situation there shall be developed throughout the South a spirit that will guarantee right treatment for the negroes—and they have not always received justice in court and elsewhere—the full payment for the work done and the employment as far as may be possible of only the efficient, honest negroes on the farm and in the house, good work will be done for the whites and for the negroes and for the South.

No man can cheat another man without shriveling his soul. No white man can cheat or mistreat a negro without doubly shriveling his soul because the responsibility of the white man is greater in dealing with an inferior race. The South has suffered in many respects because of the ill treatment of negroes by bad Southern white men and the failure of good white men to give fullest protection legally and in every other way to the negroes. To the extent that this has been done it has minimized the moral forces of the whites, for no man can participate directly or indirectly in the mistreatment of an inferior without himself suffering in his moral nature.

We are glad, therefore, to have Mr. Middleton's view of the subject. He writes as follows:

"I agree with you in your views touching the exodus of the negro from the South; I believe it will prove to be a blessing from the skies.

"I told my relative John Temple Graves years ago that I thought I had the better solution of the negro problem: his was colonization and mine was dissemmination.

"I was in Concord, Mass., about fifteen years ago, going out from Boston, and expecting to see a great many negroes at Concord, since it was the home of Abolitionism. I saw no negroes. Inquiry from a knot of gentlemen on the street revealed the fact that there were no negroes there; that the people of Concord did not wish them; and what was more, did not propose that they should live there. I was told that the negroes were given all the 'equality' that could be desired—to sit in the churches with the whites, to go to schools with them, etc. 'But we won't give them any work,' I was told, 'and they soon leave.' There is a great deal in that little incident. I came back and wrote an article about it and asked which was the worse—making a chattel slave of the negro or setting him free and refusing to let him work to earn his daily bread. Mr. James R. Randall wrote an editorial about it here. And some Concord writer responded, saying that the Concord people held the negro in high esteem; gave him all the rights and privileges, to vote, to attend divine worship in the same house as his white brothers, etc. But he did not deny the fact that there were no negroes out there or that the whites refused to let them gain employment.

"If the North would let down the bars with respect to the negro—let him work everywhere, on contracts, etc., beside whites, as he is allowed to do in the South—there would be several millions of them to go North; and this would be a great blessing to the whole country. It would put the North in touch with the 'negro problem' and cause less criticism of the Southern treatment of the negro. But more than all it would relieve the South of the too-heavy burden of educating and civilizing him and enable the negro to advance more rapidly in the country as a whole. Those that went North would meet better means for their betterment than they could receive in the South; and the fewer numbers left in the South would get a better distribution of benefits.

"The best that the negro can get from our white civilization in America is what he derives from the business and social contact with the whites. Congested in the South, on the plantations, etc., this contact with the whites is, and will continue to be if he stays here in such large numbers, too slight and impersonal for him to get the maximum benefits from it. Mixed through the North this personal contact with the whites would be improved; and, his numbers greatly reduced in the South, this personal contact with the whites here would be increased. By reduction in numbers prejudice against him in the South would wane; as long as he stays here in masses, this prejudice, of its kind, will remain to a large degree.

"It is to the negro's interest to dissemminate. It is also to the interest of the Southern white man and the Southern country that he should scatter. We cannot make a great country in the South as long as the negro is here in such large numbers; as well expect 30 to 40 per cent of Englishmen to make a great civilization in Egypt with the remaining population fellahs. Nature abhorbs a vacuum. Whites are kept from filling the South mainly because of the negro. In proportion as the negroes leave, whites will come in. Let the North and West and Europe realize that negroes are leaving the South in great numbers, and their whites will prepare to satisfy a longing to come to this wonderful country—the South will not lack for population long because of an exodus of the negroes. The old quarrel between the North and the South would largely subside.

"I believe the Lord is ordering it all—in the best way, of course. Our laws in the South against the emigration agent should be repealed. We should help the negro to get a fair showing in the North. However, owing to the perversity of human nature, if the North thought we wanted the negro to go there they might want him less; and if the negro thought we wanted him to leave the South in large numbers he might change his mind about going."

Commenting on this situation the Western Recorder of Louisville, a leading religious paper says:

"Several of our exchanges have been saying so many timely and good things lately that we heartily wish we could reproduce many of their fine editorials and articles. We cannot, but we are marking some of them to publish on the first opportunity. Of course, the MANUFACTURERS RECORD is one of these alert exchanges. To use a colloquialism, the RECORD is always 'hitting the ball.' We know of no secular and few religious publications which are such fearless and straightforward voices of high and true principles as is the MANUFACTURERS RECORD. To break in almost at random on a dozen timely editorials in the RECORD of June 7, we note that Editor Richard H. Edmonds backs up a prominent farmer in Mississippi who declares that a great reason Negroes are leaving the South for the North is that 'some white men are swindling them.' The RECORD says: 'That negroes have been swindled by unscrupulous white men is true. They have also been swindled by tricky negroes, but that does not have the same influence upon them as being swindled by a white man. The white man who swindles a negro, or robs him of his pay, or cheats him in a trade, is meaner in soul than is the mangy, flea-bitten cur that slinks into the back alleys and lives on garbage.' The RECORD says, and says well, more to the same effect.

"The Western Recorder Editor grew up on the farm in a section where negroes were numerous. He knows that it is true that an element of the whites have long cheated the negroes. It is as shameful and 'yelow' as the MANUFAC-

TURERS RECORD says it is. Talk of practical righteousness: Let our Baptist people in the South—preachers and laymen—work to stop these cheaters of a weaker race from their evil deeds! They are relatively few, but they are a humiliating reproach to our superior Southern Anglo-Saxon civilization."

## THE FOLLY OF DEPENDING UPON CHILE FOR NITRATES.

THE United States Department of Agriculture has issued a bulletin to the effect that although we are the largest users of nitrate in the world this industry is operated in such a way as to give Great Britain a strong advantage over this country. This statement is based on investigations made by an expert of the department, who has studied the subject in the principal countries of Europe. Control of Chilean nitrate prices practically rests with a London committee made up of representatives of British nitrate houses. In consequence of the existence of a Producers' Association, competition which might bring about economy in production is eliminated and the United States, which buys nearly one-half the nitrate exported from Chile, is left without any voice as to the price.

The producers are organized in an association which allots the quantities to be sold by each plant. Plants that cannot produce at the going price sell to the more efficiently managed concerns, which, for the sake of controlling as much tonnage as possible, pay the less efficient producer a bonus. This system penalizes nitrate users everywhere and American farmers are paying this penalty. In theory the price-fixing is done by a committee in Chile, but in reality by a London subcommittee, which practically controls the situation. In 1920 to avert a threatened disaster from price reduction British nitrate firms organized a pool to distribute the surplus stock on hand.

Our total consumption of Chilean nitrate last year was 733,000 tons out of a world's consumption of 1,850,000. Prior to the war Germany, by reason of the very heavy fertilization of its soils, was the largest consumer of Chilean nitrates. But, during the war, Germany erected plants capable of fixing 500,000 tons of nitrogen from the air annually and this made her independent of Chile.

It is criminal folly in the light of these facts for the United States not to develop nitrate fixing from the air by our abundant water powers and thus save ourselves from dependence upon Chile. The question of the price is of secondary importance. We might at any moment be cut off completely from the supply of Chilean nitrates.

It is easily conceivable that war conditions on the Pacific Coast might make it impossible for us to secure Chilean nitrates, thus almost destroying our power to protect ourselves against the enemy. Such inertness is criminal folly. When faced by the dangers of the European war, we rushed into the building of nitrate fixing plants. Enormous sums had to be expended as rapidly as possible, just as we had to build ships without regard to cost in order to protect our very life as a nation. Never again should this country permit itself to be in that position. At Muscle Shoals, and perhaps at other points where water power is available, the national government should in some way make certain the utilization of hydro-electric power on a very large scale for the production of nitrates essential for the needs of the country at all times and for our safety in time of war.

## LET ITS ILLUMINATION SPREAD.

MR. T. J. BROOKS, Chief Clerk, Department of Agriculture, Florida, in acknowledging receipt of a copy of the Blue Book of Southern Progress writes:

"It is a wonderful compilation of facts and figures on the South and deserves circulation in all schools and libraries as well as among the reading public at large.

"It is an inspiration to follow its illuminating pages."

## SOUTH HAS HIGHEST BIRTH RATE AS WELL AS LOWEST DEATH RATE.

THE South which has the lowest percentage of foreign population and likewise the lowest death rate, has the highest birth rate. North Carolina, which leads the nation in the smallness of its foreign stock, with only seven-tenths of one per cent, likewise leads the country with the highest birth rate, which for the first nine months of 1922, as shown by Census figures recently issued, had a birth rate during that period of 30 per thousand of population.

It is noticeable in these figures that the far Western and Pacific Coast states have the lowest birth rate. Washington had for the nine months 18.3 births per thousand and California 20 per thousand, while Montana had 18.7 per thousand.

Connecticut had 21.9 births per thousand which is very much lower than any one of the six Southern states given in the Census list, the lowest Southern state in this report being Kentucky, with 23.3 births per thousand. Even this is in excess of nearly every state outside of the South in the Census report, and is in excess of the average reported for all of the states listed which is 22.8 births per thousand.

This preliminary bulletin of the Census does not cover the entire country. Some of the states do not report births. Only six Southern states are included in the registration area covered and about an equal proportion of the other states.

Connecticut, Delaware, Indiana, Kansas and New York had less than 22 births per thousand.

Comparing the birth rate of the six Southern states reported with six states of other sections having the highest birth rate outside of the South, it is seen how far and away the South leads in the number of births per thousand of population for the first nine months of last year. It is a remarkably important fact that these Southern states which have the lowest foreign population have the largest birth rates. These Southern states also, as shown in a recent issue of the MANUFACTURERS RECORD, have a lower death rate than for the rest of the country and a very much lower death rate than for many of the supposedly healthful states in the Union.

BIRTHS PER THOUSAND OF POPULATION.

| Six Southern States | Births per Thousand | Six States Outside South | Births per Thousand |
|---|---|---|---|
| North Carolina | 30.0 | Wyoming | 26.1 |
| Virginia | 27.7 | Pennsylvania | 24.3 |
| South Carolina | 26.5 | Minnesota | 23.6 |
| Maryland | 23.7 | Michigan | 23.1 |
| Mississippi | 23.5 | Nebraska | 23.0 |
| Kentucky | 23.3 | New Jersey | 22.9 |

## HEAVY SHIPMENTS OF FOODSTUFFS.

A DISPATCH from Crystal Springs, Miss., says that during the week ending June 28th, 361 car loads of tomatoes were shipped from that point, bringing to the growers $400,000 and yielding to many of them very handsome profits. It is estimated that from that immediate territory there will be shipments of 2000 car loads during the season. Some of these tomatoes have appeared in Baltimore markets. They are the largest and finest we have ever seen.

But what Crystal Springs and that immediate vicinity are doing in the way of furnishing foodstuffs to the North and West typifies what is going on in hundreds of other places throughout the South. The growth of the early vegetable and trucking business, by which people in all sections of the country can have fresh vegetables the year around, is a modern development of which we have seen only the beginning. It means that the South is to be the winter garden and the orchard for a very large part of the entire country. It means an enormous increase in railroad traffic for this freight, which pays high rates, and that the South will become more and more independent of cotton growing and will add more and more each year to the wealth secured from the soil by reason of this early fruit and vegetable business.

## TO INCREASE RESPECT AND REGARD FOR THE CONSTITUTION OF THE UNITED STATES.

BULLETIN No. 1 of the Constitution Anniversary Association, 28 E. Jackson Boulevard, Chicago, declares the aims of that organization as follows:

1. To further a widespread observance of the Anniversary of the Constitution of the United States during the week of September 17th each year.
2. To stimulate a study of the discussions involved in its writing, adoption, interpretation, and administration.
3. To arouse a keener appreciation of its value and importance as an aid to solving present-day problems.
4. To bring about a clearer understanding of that great document for the general welfare of this generation and posterity.

That the average individual takes the Constitution and respect for and observance of it for granted is too true. Without knowing much if anything about it he seems to think that somehow the Constitution will take care of him and his descendants for generation after generation without effort on his part and even without concern. It is manifest that such a thing cannot be. In the nature of human affairs there is a constant longing for change, with the expectation that change would mean improvement and there are those who, with good enough intentions maybe, endeavor to accomplish and sometimes do accomplish changes in our fundamental law, which if they had thoroughly studied and considered the history of the convention which prepared the Constitution of the United States, they would not have proposed. The popular election of senators which the MANUFACTURERS RECORD criticized when proposed is one instance of this. Realizing that legislatures had sometimes been corrupted in the interest of candidates for senatorship the people generally approved the idea of electing senators by popular vote, most of them not comprehending the dangers of such a method. Furthermore, they apparently did not appreciate the fact that they themselves were primarily responsible for electing to legislatures men who could be corrupted. The idea of the founders of our government was that members of state legislatures would be picked men, who would be better able than the mass of the people to estimate the worth of senatorial candidates and thus reject pretenders who by means of demagoguery might be able to win popular favor. Members of state legislatures should be chosen with as much concern for their ability and fitness as should members of any other body charged with the making of laws. The people themselves can, if they will, see to reform in this respect.

Therefore, study of the Constitution and consideration of the proposition to accomplish a widespread observance of the anniversary of the fundamental law of our country merit attention generally. The bulletin of the Constitution Anniversary Association, commenting upon the results which followed the adoption of the Constitution, says that few people realize what a beneficent transformation was brought about in this country through the adoption of our plan of government and that it brought order out of chaos. Furthermore it says:

"An understanding of the means employed to bring about that marvelous improvement of conditions is surely desirable today, for to bring order out of chaos is the supreme problem now."

Extracts from letters written by George Washington, during a period of six years immediately before and immediately after the Constitution was adopted, are included in the bulletin. To Bushrod Washington, during the period of the Confederation which preceded Constitutional government, he wrote: "The fabric which took nine years, at the expense of much blood and treasure to rear, now totters to the foundation, and without support must fall." To James Madison he wrote: "We are fast verging to anarchy and confusion." Then, following the adoption of the Constitution, he wrote to Patrick Henry: "If nothing had been agreed upon by that body, (the Constitutional Convention), anarchy would soon have ensued, the seeds being deeply sown in every soil." To Marquis deLafayette he wrote: "Our country, my dear sir (and it is truly yours), is fast progressing in its political importance and social happiness. The laws of the United States, adapted to the public exigencies are framed with wisdom and moderation and acquiesced in with cheerfulness." To M. de La Luzerne he wrote: "The complete restoration of our public credit holds us up in a high light abroad."

It would, of course, be necessary for one to peruse attentively the history of the Constitution and of the conditions existing in the country when the Articles of Confederation constituted the only ties between the thirteen original states, in order to comprehend the full meaning of Washington's remarks, but the hearty approval which the first President of the United States thus gives to the Constitution is significant and should have great weight with all of us, enhancing our respect for the fundamental law and causing us to study and consider deeply all points involved when any changes are proposed.

Harry F. Atwood, president of the Association, asks in the Bulletin: "What did the authors of the Constitution and the founders of this republic seek to avoid and what did they adopt as a means of bringing order out of chaos?"

Continuing he says: "With the world in a chaotic condition and our own country drifting into dangerous tendecies, this question deserves serious consideration of the people of this generation. Unfortunately it is a question which is too little understood. A mere reading of the Constitution does not mean much to the average person. Study and understanding are required in order to realize its value and possibilities in government, just as the scale in music or the ten digits in mathematics must be studied and understood in order to realize their value and possibilities." Following, he recommends reading of the Federalist, the records of the Convention of 1787 and other works treating of the Constitution and of our government and he also suggests that the people in each city and other communities bring about a general discussion of the Constitution during the week of September 17 this year.

In a letter to the editor of the MANUFACTURERS RECORD referring to a study of the Constitution, Mr. Atwood says: "You will be interested to know that under the guidance of Harry Chandler, editor of the Los Angeles Times, an oratorial contest was put on in the schools of Los Angeles and Southern California in which over 7000 students participated before audiences of over 400,000 people. It was such a success in Southern California that they plan to make it nation-wide this year and Mr. John Hays Hammond has offered $100,000 to be used in prizes."

These various activities past, present and proposed ought to bring about increase of respect and regard for the Constitution with valuable resultant benefits to the country in its entirety. It is especially appropriate that while celebrating July the Fourth our country should understand the Nation's Constitution and the struggles connected with its adoption.

## FROM GEESE TO GEESE.

American importers have bought in Germany millions of small, bright colored plumes to trim men's hats. The feathers will be used on next winter's headgear. Shipments are being made to the United States. Guinea hens, chickens, turkeys and geese have contributed.—Review of Industry.

And the geese feathers gathered from German geese will be worn by some American geese.

## THE ENTHUSIASM OF AN ARKANSAS ENTHUSIAST.

MR. W. B. CRAKER, president of the Progressive Realty Co., of Camden, Ark., handling loans and investments, is such an enthusiastic advocate of the South, and of Arkansas, and of the Blue Book of Southern Progress, and the MANUFACTURERS RECORD, that he is endeavoring to sell in his county 1000 copies of the Blue Book wholly as a matter of patriotic interest, and not with a view to any financial interest for himself. He is ordering the Blue Book in lots as sold; and merely as indicative of the enthusiasm with which he is going at the work we take from a recent letter, enclosing a check for an order of Blue Books, the following:

"For your information will give you a list showing the class of people I have sold to so far.

"A. C. Gallivan, of Boston, Mass., president new gas company here.

"Alexander Scott, progressive business man here.

"W. C. Smith, wholesale lumber manufacturing, Little Rock and here.

"J. I. Gillispie, oil operator, Texarkana and here.

"Will Hardy, paint and glass store here.

"J. M. Lide, the fire insurance man here.

"Dr. W. S. Word, Mayor; most progressive business man here and in all southwest Arkansas.

"W. A. Mauldin, Manager, Davis Furniture Co.

"Judge T. J. Martin, prominent attorney and oil operator; one of southwest Arkansas' best citizens.

"K. B. Herbert, Secretary-Treasurer, J. A. McLeod Land Co., here.

"W. P. Ritchie, retired business man, one of Camden's most popular citizens.

"L. B. Robertson, of Kentucky, oil operator, here.

"Hon. T. J. Gaughan, of Gaughan & Sifford, leading law firm of southwest Arkansas.

"Geo. R. Gordon, Vice-President, Ouachita Valley Bank, one of Camden's most progressive business men.

"J. D. Reynolds, of J. D. Reynolds & Co., the gentleman who is directly responsible for all the oil interest in and around all Camden, and southwest Arkansas.

"J. S. Cooney, of Chicago, Ill., commercial man.

"Beaula Ivey, one of the leading and most progressive colored school teachers here; wife of Bud Ivey.

"Dr. H. E. Kirkpatrick, Pastor of the First Baptist Church here; $100,000 church near completion.

"Tom McNelley, of Chicago, Ill., large oil operator at Smackover, Arkansas.

"Dr. H. A. Pennington, the eye man of Camden; a wide awake, young, progressive business man of southwest Arkansas.

"W. R. Smith, president Board of Education; business man, largely interested in all Camden's best interests.

"Prof. A. W. Patterson, with the Colored Baptist Academy here; one of the leading colored schools of southwest Arkansas.

"Dr. W. P. Elliott, dentist, one of Camden's progressive and best known families in southwest Arkansas.

"Miss Marie Yarbrough, one of Ouachita County's best and most popular young lady school teachers.

"Miss Juanita Craker.

"While you know much of Arkansas I am sending to you a little folder. The writer recently put out 10,000 to hand out to all 'Booster' trains that come through here. And as a matter of fact, I am guilty along with many others who use the MANUFACTURERS RECORD, without making mention of it, as you will note in this little booklet, rather folder. And the address of the Hon. Jacoway on Arkansas is what we send out to all of our out of state inquiries.

"Just as we have so stated in the little folder, we can prove to the entire satisfaction of any one who will let us show them, that we have the town with greater future possibilities than any other in all Arkansas.

"To give you an idea as to what the writer thinks of the MANUFACTURERS RECORD, I have only one son, and he is now thirteen, and if I had to stop him from school, or the MANUFACTURERS RECORD, I would stop him from school. Every week he reads everything in it to me of evenings when my day's business is closed. Then the daughter, eighteen, likewise reads everything in it, and my wife, also awaits with much anxiety the arrival of the MANUFACTURERS RECORD and reads everything in it.

"Therefore, if I can get at least 1000 of the Blue Books, and MANUFACTURERS RECORDS, placed in this county, it will be easy sailing to develop a town of at least 50,000 here, by or before January, 1930."

Mr. Craker's brief comments on the people to whom he has sold copies of the Blue Book are worth republishing as a matter of interest as indicative of his enthusiasm, and his comments in regard to the possibilities of Camden and of Arkansas generally are likewise of interest.

We do not know Mr. Craker, but we can judge from his activity and enthusiasm that evidently he does not let the grass grow under his feet. We would that there were a thousand other men throughout the South as eager as he is to spread the news of the South's resources and its possibilities as told in the Blue Book of Southern Progress, and likewise in every issue of the MANUFACTURERS RECORD.

## WHY WE ARE SHORT OF MECHANICS.

MANY contractors and builders are wondering why the young men of the country are not entering the trades. The answer is simple. For years it has been the custom of many people to denounce every effort made by mechanics to secure better wages. They have been so vigorously and sometimes so viciously critized in their struggle for higher pay that they do not want their children to follow in their footsteps and be subjected to the same ignominious vilification. Their children too have seen that many of them are out of employment a considerable part of the time, caused sometimes by weather conditions and sometimes by slack building operations. The mechanical trades are not popular with young American boys because American people have denounced the mechanics every time they sought to get a living wage. We are short of carpenters and plasterers and brick layers and other mechanics because as a nation we have done our utmost to discredit these and other mechanical pursuits.

In addition to criticizing their efforts for fair wages, they have been held up to scorn in every way possible. No longer are we praising the honest hearted mechanic; no longer are we praising the trades as worthy of any boy's life work. We are doing this through the newspapers; through public criticism of mechanics and, to a considerable extent, through out educational system. The whole policy of the country during the last twenty-five or thirty years has tended to keep boys from following mechanical pursuits. We have discouraged them in every way possible. We have permitted the union labor leaders to lessen the number of apprentices. We have established few schools in which boys could learn trades and the boy who leaves school in order to earn a living finds that he can get a job which will pay him at least a small salary very much earlier than he could earn the same amount of money by becoming an apprentice to some mechanical pursuit.

We must retrace our footsteps. We must once more uphold mechanical pursuits and give praise to the man who mixes the mortar or the cement, to the man who carries the hod, to the man who lays the bricks, to the carpenter who does the lumber work, to the plumber upon whose honesty our health depends, and recognize in them fellow-beings contributing their part to the affairs of the world.

We talk much about labor inefficiency, and about the waste of time by mechanics. All of this is to some extent true but the country itself is more responsible for these conditions than are the men who are following mechanical pursuits. They have been criticized until they have developed a very natural resentment against the public. They know that efforts are made by many to keep down their wages. If on the other hand we were praising the efficient men, if we were giving hearty commendation to every man who does a good piece of work and paying him a living wage for his work we would build up a morale which would soon stimulate all mechanical pursuits and make men proud of the work which as mechanics they could do.

## THE IMPOSSIBLE OFTEN BECOMES THE REALITY.

MR. ALONZO B. SEE, a leading business man of New York, in writing for some extra copies of the MANUFACTURERS RECORD of June 14, and referring to a special article in that issue, said:

"Your article entitled 'Public Sentiment Rules the Land and Business Men Must Cultivate It,' is by all odds the best I have ever read on that subject."

The point of that article was to the effect that business men had permitted radical propaganda of all kinds to be spread broadcast throughout the land and had never made any serious efforts to counteract it. They have ignored the power of public sentiment, just as the railroads for years ignored it. They have ignored the right of the public to full, frank and free discussion of all questions relating to the great issues of the hour. And even if the public had no moral right to such information it would be the duty of business men to give it to the public to safeguard themselves from the power of hostility due to secrecy.

The policy of the Standard Oil years ago in not replying to any of the attacks made by muck-raking writers in magazines helped to produce some of the anarchistic spirit that is existing today. When this tide of criticism was at its highest the editor of this paper in writing to Mr. Henry M. Flagler in connection with the large development that he was making in Florida, took occasion to say that he would presume to offer some advice to Mr. Flagler and his associates not in the interest of the Standard Oil Company, but in the interest of the country. It was pointed out that the failure of that company to reply freely and fully to every public attack made upon its management would inevitably result in creating a greater spirit of anarchy throughout this land than all the mouthings of all the soapbox orators; and the company was urged as a matter of national welfare to recognize that the public had rights, and in this case their right was to have a full and free reply to every attack made upon the honesty and integrity of its management.

The Pennsylvania Railroad people were warned when they ruthlessly cut down the Western Union wires along their line that though they were "within their legal rights," they were creating a spirit of anarchy which would inevitably cause that road and all other railroads in the country to lose public confidence; and in place of confidence create public hatred. Other railroads were directly warned of the same ill effects. What that spirit cost the railroads of the country is beyond estimate.

Within the last few weeks the iron and steel interests have been more bitterly assailed than ever before in their history because of the report of the twelve hour labor day, due largely to the unwise wording of that report and to the unwise way in which it was given to the public. But the iron and steel interests have taken no step to present the actual facts to the whole public. The result is that about 999 people out of every 1000 in this country believe that the steel interests are ruthless enslavers of labor on a twelve hour day basis, whereas if the actual facts were made public fully and freely, as they ought to be, through every daily paper in the land, the public would have a very different conception of the situation.

There is a withholding of the money that ought to be expended for the right kind of publicity work which tends to poverty of soul; and, more than that, to bitter criticism, which would be prevented or ameliorated by the right kind of publicity work. We have now come upon a time when men everywhere, in every profession, and in every line of industry must recognize that there are dangers ahead that cannot be overcome by shutting their eyes to these realities. They must see that rampant radicalism is doing its utmost to overturn our Government, and that self-complacency is our greatest danger. Men say to themselves that it is impossible for such a Government as this to be overturned, forgetting that through all the ages the thing that was thought to be impossible has become the reality.

It is time for the business people of this country to wake up. Their own property, their own prosperity, and this Government can be saved, but it will take herculean work, broad vision and untiring energy to make this a certainty.

## A SILLY VIEW OF THE SOUTH'S COTTON INDUSTRY.

A LETTER from William Whittam, an American correspondent of the Textile Recorder of England, says:

"The MANUFACTURERS RECORD is carrying on a continuous campaign to belittle the attempts at cotton growing in new countries by British and Continental spinners. In the light of the history of the development of cotton production in the United States, the arguments put forward would be laughed out of any court. * * *

"The problem of negro migration from the South is assuming the proportions of a social revolution, and is having an especially pinching effect in the cotton belt.

* * * In the South, all the blame for this movement is indiscriminately thrown upon the "beggarly" (sic) price of cotton. The simultaneous drift of the "poor whites" from field to factory invokes less comment. Not enough attention is given to the underlying causes of this dissatisfaction of the farm worker with his lot. He is discovering that when he reaches the North both his industrial and social status are radically changed."

The profound ignorance of Mr. Whittam in these statements only serves to show how little a supposedly reputable English textile writer knows about the situation.

The MANUFACTURERS RECORD is not seeking to belittle the attempts to grow cotton in other countries, but merely showing that all the efforts of England and the Continent to accomplish that purpose put forth during the last one hundred years have accomplished nothing of any importance. If England and the Continent can grow cotton in other countries to profit the MANUFACTURERS RECORD will bid them Godspeed in the work, for the world will need more cotton than the world has any likelihood of securing for years to come; and if the thought of the South can be turned from growing cotton as a primary crop to making it wholly a secondary crop after the South has raised other things in which there is more profit, this section will be marvelously blessed thereby.

For a hundred years England has been filling its newspapers and Parliament and the meetings of the English Cotton Spinners with promises of raising great crops of cotton in Africa and elsewhere, but none of these hundred-year-old promises have materialized. There is little more to them today than there was a hundred years ago; whereas the development of cotton production in the United States has been of such an entirely different character that the statement of Mr. Whittam on that subject is just about as lacking in ordinary intelligence as could be expected from some one who had never known anything about the world's cotton crop.

Within fifty years from the time the South really began to raise cotton as a commercial proposition, and without the aid of outside capital or help of any kind, it developed a cotton industry which dominated the politics and finance of Europe and America. Its cotton crop by the beginning of the Civil War had reached nearly 4,000,000 bales a year. England with all its vast accumulated capital and the power of its textile and financial interests has been for one hundred years trying to develop cotton growing in Africa, and when it can find a spot where it can boast of having raised as much as 50,000 bales a year it heralds that event so strongly that cables are actually sent to this country telling about the achievement.

The movement of a comparatively few negroes from the South is not "assuming the proportions of a social revolu-

tion" as stated by Mr. Whittam. The number that are going is not sufficiently large to materially change the status of the South in any respect whatever, and those that are going are largely going because the "beggarly" price of cotton forced upon this country by the combined influence of foreign buyers had made cotton growing unprofitable even before the boll weevil came along; and in the end the boll weevil will prove a blessing to the South, as it will result in changing the agricultural conditions of that section and forcing Europe to pay a decent living price for cotton.

The "poor whites" to which Mr. Whittam so contemptuously refers, are poor by reason of the combined power of European financial and textile interests in beating down the price of cotton and keeping these people in poverty, just as the cotton growers of India have been kept so poor that the people of India are the poorest on the face of the earth, in any supposedly civilized region.

The negro is not discovering, as Mr. Whittam says, that in the North his industrial and social status is radically changed. He has no more of social equality with the people of the North than he has with the people of the South. Those who go North are getting better pay at present than they got in the South because though England and New England strove for many years to destroy slavery, and were wise in doing so, the cotton buyers of New England and of England and of the Continent have always acted as though they thought that cotton was raised, and should be raised, on the basis of slave labor; and they have been perfectly content to see the cotton grower live in economic slavery by reason of the really beggarly price paid for cotton. This has simply been an inherited trait of certain New England and English people coming down for many years, from a time when cotton was raised by slave labor, and they have not got over that impression yet.

## WOULD AMEND ALABAMA CONSTITUTION TO LIFT TAX RATE LIMIT REGARDING MUNICIPAL BONDS.

RELATIVE to the efforts of the Investment Bankers Association of America to have the Constitution of the State of Alabama amended so as to modify the limitations which it places upon the tax rate, Jno. E. Sutherlin, New Orleans, sends the MANUFACTURERS RECORD a copy of a letter written to Governor Wm. W. Brandon, by John C. Thompson, attorney and Counsellor at law, New York, concerning the effect of these limitations upon the marketability of Alabama bonds issued either by the state itself or by counties, municipalities, or other sub-divisions of the commonwealth.

Mr. Thompson refers to a decision of the Supreme Court of Alabama which he says, "held that when the interest and principal of municipal bonds are specially charged on the general revenues of the city, only the surplus income after legitimate expenses of a city have been provided for can be applied on the debt. The result was that inasmuch as the ordinary operating expenses had first to be provided, the creditors holding the bonds of the municipality did not receive payment on the date fixed by the securities and could only compel payment as they should be able to establish a surplus income over the necessary operating expenses. * * *

"The result of the constitutional limitations and of this decision," continues Mr. Thompson, "has been that many of the largest and best banking houses will not invest in the municipal securities of the State of Alabama. * * * The consequence has been that the market for Alabama securities has been contracted and limited and the counties, municipalities and other public bodies, in order to market their securities have been obliged to increase the interest rate beyond that which they would otherwise have had to pay. It is a safe statement that the limitation upon the rate of taxation has cost the counties, municipalities and political divisions of Alabama at least one-half of one per cent annually by way of increased interest. * * *

"Under these circumstances I believe that it is the highest and best interests of the State of Alabama to submit to the people and to urge the adoption of a Constitutional amendment, placing behind all bonds issued by the state or any of its counties, municipalities or political subdivisions, a tax sufficient to pay the principal and interest at maturity without regard to any of the limitations contained in the Constitution."

With his letter Mr. Thompson submitted the draft of an amendment prepared by him at the request of the Investment Bankers Association, this to apply to all bonds in Alabama either issued or to be issued.

## INCOME TAX ON EARNED AND UNEARNED INCOMES.

SENATOR REED of Pennsylvania proposes to introduce a bill on income taxation which will differentiate the tax on earned and unearned incomes. For instance, the tax on an income of say $25,000 for a man who draws that as a salary by reason of work, should be different from the tax on an income of $25,000 which inures by reason of fixed investments drawing dividends.

In earning a salary of any amount, whether it be $1000 or $100,000, a man is using up the capital of his very life. He is wearing himself out, or, in other words, spending his capital in order to get this income. While the man who draws from capital already earned or inherited an equal income, is not in any way spending his capital to get that income.

Capital invested in a man's life is very different from that invested in bonds and stocks or other securities. The man who is spending his life, which is his capital, should not be taxed to the same extent as the man who is spending an income without having to work for it.

Senator Reed's proposed differentiation between these two forms of incomes in the matter of taxation should be readily adopted.

## MISSISSIPPI MOVES FORWARD.

BUSINESS, pleasure and recreation opportunities of South Mississippi are listed in an attractive, illustrated folder compiled by the Mississippi Development Board of Hattiesburg, Miss., in cooperation with the Gulfport, Biloxi, and Hattiesburg Kiwanis Clubs.

Under the heading, "Mississippi Is Awake!" it is stated that Mississippi is not only awake but she is doing things for her own people that are attracting more people, and she is engaged in an active campaign to "sell" other people what she has to offer. The Board in pointing out the opportunities offered in the state along agricultural, industrial and tourist lines gives the following:

"Mississippi has more consolidated and agricultural schools in proportion to white population than any other state.

"Mississippi, by one of the greatest majority votes, made a change in her Constitution to permit her to participate in a great highway building program.

"Mississippi has made the greatest percentage of increase in the sale of butter fat of any state in the last Census period.

"Mississippi, during the same period, led all the states with a 96 per cent increase in hay production.

"Many Mississippi communities in cooperation with her landowners are preparing ready-made farms with all conveniences to be sold to actual settlers on long time, easy payments and without speculation.

"Mississippi has as great a variety of farm products that can be grown in merchantable quantities as any state in the Union, and that she is closer to the great markets of the world than any other state with the same agricultural possibilities.

"Mississippi is becoming one of the great citrus producing

states, specializing in the Satsuma or 'Kid Glove' orange, and grapefruit.

"Mississippi has the largest fig farm in the South.

"Mississippi ships thousands of cars of fresh vegetables outside the state during the winter months.

"Mississippi offers openings in varied lines of manufacture based on abundant raw material, quick transportation, nearness to markets, good labor conditions and reasonable fuel prices.

"The Mississippi Gulf Coast presents to both winter and summer pleasure seekers, an unrivaled climate, a variety of sports and good transportation facilities."

## A $4,000,000 ELEVATED RAILWAY FOR HANDLING ORE AND COAL IN BIRMINGHAM DISTRICT.

THE Tennessee Coal, Iron & Railroad Co., one of the subsidiaries of the Steel Corporation, has announced it will build a standard gauge elevated railway five miles long, from its Red Mountain ore mines to Fairfield and Ensley to reach its furnaces and steel plants. The entire railway is to be elevated in order to eliminate grade crossings, of which there are many in that district, and thus secure the quickest possible transportation of ore.

The building of the road and the development connected therewith is estimated to cost about $4,000,000.

The building of a five mile elevated road to expedite the handling of ore is indicative of the magnitude of operations in the Birmingham iron and steel district, and it would seem to suggest that possibly the Tennessee Company, when that road has been completed, will continue the expansion of its operations by the building of additional furnaces or steel plants, or both.

## IDLE FARM LAND IN PENNSYLVANIA.

MUCH ado is being made in dispatches from the South about the movement of a comparatively few negroes from the South to the North and West reducing the acreage in Southern crops. If one were to accept seriously all of the statements made, the impression would be gained that the South was being seriously menaced in its agriculture by reason of a lessened acreage in some of its crops; but Pennsylvania, one of the richest agricultural states in the Union, reports that 300,000 acres of farm land will remain idle in that State this summer largely as a result of the shortage of farm hands. The dispatch from Harrisburg which gives this information says that this is about 10 per cent of the total agricultural acreage of the State.

What is going on in the South in the way of a slightly lessened acreage here and there is not purely a Southern problem. Pennsylvania, if the figures are correct is largely ahead of any State in the South in the amount of farm land in idleness this year because of a shortage of labor.

Labor is going from the farms into the towns and into industrial employment, and it will continue so to go until the swing of the pendulum gives to farmers a more profitable price than they have had for some years on their products. Farmers cannot go on continuing to produce as heavily as they have done with the small profits to themselves as for some years.

## WALK INTO MY PARLOR.

IT is no wonder the Manchester Cotton Association has voted to adopt the report of its committee on the cotton standards reclassification act, since that conference gave to English buyers the right to have all questions in controversy settled by Liverpool arbitration. "Walk into my parlor," said the spider to the fly. "'Tis the prettiest little parlor that ever you did spy." The fly walked in and we know what happened.

## DELIVERY OF THE MANUFACTURERS RECORD TO SUBSCRIBERS.

WE are often in receipt of complaints of the slow delivery of this paper to our subscribers. This is sometimes due to railroad trains missing connections, and sometimes to the overcrowded work of postal clerks.

In order that our subscribers may know the hour at which their copies of the Record are mailed and when they should be delivered we give the following table showing the hours of mailing to different states, and the day on which delivery should be made by the post office. If our subscribers find that their papers are not received regularly on these dates we will appreciate it if they will so advise us.

| HOUR OF MAILING | | | |
|---|---|---|---|
| Dispatched | Time | State | Should be Delivered |
| Wednesday | 10.50 AM | North Carolina | Thursday |
| Wednesday | 10.50 AM | South Carolina | Thursday |
| Wednesday | 12.55 PM | Maine | Thursday |
| Wednesday | 12.55 PM | New Hampshire | Thursday |
| Wednesday | 12.55 PM | Massachusetts | Thursday |
| Wednesday | 12.55 PM | Connecticut | Thursday |
| Wednesday | 12.55 PM | New York | Thursday |
| Wednesday | 12.55 PM | New Jersey | Thursday |
| Wednesday | 12.55 PM | Pennsylvania | Thursday |
| Wednesday | 12.55 PM | Delaware | Thursday |
| Wednesday | 12.55 PM | Virginia | Thursday |
| Wednesday | 12.55 PM | West Virginia | Thursday |
| Wednesday | 1.55 PM | Maryland | Thursday |
| Wednesday | 2.40 PM | Vermont | Thursday |
| Wednesday | 2.40 PM | Rhode Island | Thursday |
| Wednesday | 2.40 PM | Ohio | Thursday |
| Wednesday | 4.10 PM | Dist. of Columbia | Thursday |
| Wednesday | 10.10 AM | Florida | Friday |
| Wednesday | 10.10 AM | Alabama | Friday |
| Wednesday | 10.50 AM | Mississippi | Friday |
| Wednesday | 10.50 AM | Louisiana | Friday |
| Wednesday | 2.40 PM | Indiana | Friday |
| Wednesday | 2.40 PM | Illinois | Friday |
| Wednesday | 2.40 PM | Michigan | Friday |
| Wednesday | 2.40 PM | Wisconsin | Friday |
| Wednesday | 2.40 PM | Tennessee | Friday |
| Wednesday | 2.40 PM | Iowa | Friday |
| Wednesday | 2.40 PM | Missouri | Friday |
| Wednesday | 4.25 PM | Kentucky | Friday |
| Wednesday | 10.10 AM | Georgia | Friday |
| Wednesday | 2.40 PM | Minnesota | Friday for S. E. & Central. Saturday for remainder of State. |
| Wednesday | 2.40 PM | Kansas | Friday & Saturday. |
| Wednesday | 2.40 PM | Arkansas | Friday & Saturday. |
| Wednesday | 10.50 AM | Texas | Saturday for N. E. portion of State. Mon. for remainder. |
| Wednesday | 1.55 PM | Oklahoma | Saturday |
| Wednesday | 2.40 PM | North Dakota | Saturday |
| Wednesday | 2.40 PM | South Dakota | Saturday |
| Wednesday | 2.40 PM | Nebraska | Saturday |
| Wednesday | 2.40 PM | Montana | Saturday |
| Wednesday | 2.40 PM | Wyoming | Saturday |
| Wednesday | 2.40 PM | Colorado | Saturday |
| Wednesday | 4.25 PM | New Mexico | Saturday |
| Wednesday | 2.40 PM | Idaho | Monday |
| Wednesday | 2.40 PM | Utah | Monday |
| Wednesday | 2.40 PM | Nevada | Monday |
| Wednesday | 2.40 PM | Washington | Monday |
| Wednesday | 2.40 PM | Oregon | Monday |
| Wednesday | 2.40 PM | California | Monday |
| Wednesday | 4.25 PM | Arizona | Monday |

## WAGES OF BRICK LAYERS AND PLASTERERS.

THE Mason Builders Association and the officials of the Brick Layers Union of New York have signed agreements for $1.50 an hour for brick layers and $1.00 an hour for their helpers, to extend to May 1, 1925. St. Louis reports that the union plasterers of that city have won their fight for $14.00 a day for an eight hour day. These rates of wages are sometimes misunderstood and it is figured out that the brick layers and the plasterers will secure such wages as are reported for 300 days or more a year. As a matter of fact, neither of these classes of mechanics work anything like 300 days in the year. In winter the weather is often too severe for the brick layers and the plasterers. Tens of thousands of Northern and Western mechanics have little or no regular employment during the long winter months. Many of them go South at heavy expense in order to secure winter work. They must save a little during the warm months to protect them against the idleness enforced by the winter. The plasterer who is getting $14.00 a day does not by any manner of means get $4200 a year. He will be fortunate if in the long run he earns half of that amount.

## THE AUTOCRATIC REPRISAL OF THE FEDERAL RESERVE SYSTEM.

THE action of the Federal Reserve Board as announced a few days ago in regard to its refusal to permit member banks to rediscount for non-member banks, and its action in regard to par clearance, is but one more effort at autocratic power to control the entire financial interests of this country. The matter is so fully discussed in this week's issue by Mr. L. R. Adams, Secretary of the National and State Bankers Protective Association, that we shall not attempt to discuss it editorially until next week by reason of the fact that the Fourth of July holiday necessitates going to press much earlier than usual.

## THE BUILDING SITUATION IN THE SOUTH SOUND AND SAFE.

### Construction Costs Much Lower Than in North.

By G. L. MILLER, President, G. L. Miller Co., Atlanta, and New York.

During the past three months I have had occasion to travel through practically every Southern State from the Atlantic Seaboard to Texas. I have visited a large proportion of the principal cities in this vast region. One of the chief purposes of my tour was to make a close, personal study of the building situation in the South from the viewpoint of the desirability of investing at the present time in first mortgages. I did this in order that I might give you the benefit of first-hand information.

I do not hesitate to state that investments secured by improved property in Southern cities are, in view of the construction situation elsewhere, especially desirable at this time.

It may be said that the total cost of a new structure in the South, (exclusive of the land) is roughly 17 per cent less than the same building in the North. In arriving at these figures I have used the basis that 63 cents of every building dollar is used for building material and 37 cents for wages. Building material costs, based on representative cities in various sections of the South, show a total of approximately 12 per cent less than the same costs based upon representative cities in the North. Building labor costs for the same Southern cities show substantially 25 per cent less than Northern labor costs. What is equally important, these costs are more nearly stabilized.

What are the reasons for these lower costs in the South? The answer is simple. Lumber, bricks, cement, stone and steel are produced within short haul of practically every large Southern city. Further, these materials are produced by comparatively low-priced labor due to the lower living costs in the South. Therefore, the manufacturing cost of material is less and to this is added less cost to lay the material down on the job.

The labor situation is nowhere else so favorable as in the South. Common labor is plentiful and cheap, wages averaging 35 cents an hour as against 75 cents to $1.00 an hour in the North. Skilled building craftsmen (again because of lower living costs) do not demand the high wages current in the North. Brick masons average $9.44 a day in the South as compared with $12 to $16 a day in the North. Plasterers are paid from $8 to $9 a day, against $10 to $12 a day in the North.

I cite these comparatively few items from the comprehensive data I have been able to obtain, in order to show plainly that the much talked of "peak in building costs" is relatively reduced to a level in the cities in which our company is conducting its financing operations. Broadly speaking, present Southern construction costs are but 14 per cent higher than Northern costs of 1917 and as much as 12½ per cent of this may be ascribed to the normal uptrend which would have occurred in any event.

It is obvious that this lower present cost greatly reduces the possibility that any future falling off in construction prices will force the value of the building below its initial cost.

Another especially strong assurance to the investor is the rapid and sound growth of these cities. The Southern Bell Telephone Company announces that plant and equipment is being planned for Southern cities on the following estimates of growth in population, based upon 1920 U. S. Census figures:—Atlanta, 137 per cent by 1940; Birmingham, 150 per cent by 1940; Charleston, 54 per cent by 1940; Charlotte, 51 per cent by 1934; Chattanooga, 220 per cent by 1934; Columbia, 197 per cent by 1937; Jacksonville, 174 per cent by 1920; Memphis, 200 per cent by 1942; Nashville, 70 per cent by 1940; New Orleans, 73 per cent by 1940; Winston-Salem 50 per cent by 1930.

It is apparent that this generous growth of cities, will result in steadily increasing property values and rental returns. Further, this population increase tends to stabilize the demand for housing accommodations. A building which is not erected this year will be all the more needed next year. Postponement means intensified demand later. This condition in turn reacts upon building costs and I cannot feel, all conditions considered, that any material decreases in building costs in the average Southern city can honestly be looked for in the near future.

In a number of Northern cities, building costs have increased to such an extent that banking houses have seriously considered plans for curtailing loans for new construction.

## Cottonseed and Cottonseed Products.

The quantity of cottonseed received at mills from August 1 to May 31 was 3,208,085 tons compared with 2,889,002 tons received during the corresponding period of 1922.

From August 1 to the end of May 3,193,524 tons of cottonseed were crushed compared with 2,962,849 tons crushed during the same period of 1922.

The quantity of cottonseed reported on hand at mills May 31 was 23,098 tons against 23,380 tons May 31, 1922.

COTTON PRODUCTS MANUFACTURED AND SHIPPED.

| | Season | August 1 to May 31 — Produced | Shipped |
|---|---|---|---|
| Crude oil, lbs. | 1922-23 | 982,756,658 | 971,615,956 |
| | 1921-22 | 916,025,098 | 910,953,246 |
| Refined oil, lbs. | 1922-23 | 873,994,702 | ..... |
| | 1921-22 | 815,116,501 | ..... |
| Cake and meal, tons | 1922-23 | 1,462,327 | 1,415,212 |
| | 1921-22 | 1,335,373 | 1,261,875 |
| Hulls, tons | 1922-23 | 925,741 | 900,704 |
| | 1921-22 | 920,784 | 933,441 |
| Linters, bales (500 lbs.) | 1922-23 | 594,693 | 581,928 |
| | 1921-22 | 391,756 | 416,831 |
| Hull fiber, bales (500 lbs.) | 1922-23 | 70,290 | 88,521 |
| | 1921-22 | 41,092 | 31,551 |
| Grabbots, motes, etc., bales | 1922-23 | 17,873 | 17,057 |
| | 1921-22 | 10,690 | 13,808 |

## How to Talk Through a Telephone.

The Blodgett Press. St. Paul, Minn., has issued a small book by Pauline Dunstan Belden which is entitled "Your Telephone: The Voice of Your Business." This little volume gives some exceedingly timely and good advice about acquiring by exercising patience, thoughtfulness, and general good temper a good telephone personality, thus increasing efficiency in daily business and in social contacts. If one speaks crossly or impatiently through a telephone he may make an enemy out of a friend or he may ruin a business transaction. The author tells of how to "put it over" when using the telephone and if her advice be followed it can not be other than to the advantage of readers.

# Broad Aims for General Development South.

## SOUTHERN APPALACHIAN POWER CONFERENCE WOULD CO-ORDINATE EFFORTS FOR HYDRO-ELECTRIC ENTERPRISE, FOREST PRESERVATION, FULL UTILIZATION OF MINERAL RESOURCES, IMPROVEMENT OF HARBORS AND INLAND WATERWAYS, INCLUDING EDUCATION OF THE PEOPLE TO AVOID UNWISE LEGISLATION—WATER POWER MUST BE ADVERTISED.

By Albert Phenis.

Asheville, N. C., June 28.

Broadening its scope and proposing to employ a full time director to carry out the plans and purposes of the organization, the Southern Appalachian Power Conference concluded a three days' session at the Battery Park Hotel here yesterday. Besides the business meetings, there was a banquet at Grove Park Inn Tuesday evening, a drive through the Biltmore Estate, a reception at Kenilworth Inn, and for those who cared to remain over, a drive to the wonderfully scenic section of Chimney Rock and to the top of Mt. Mitchell, the highest point east of the Mississippi river. These diversions were provided by the Asheville Chamber of Commerce as a gracious contribution to the entertainment of the visitors.

In attendance were hydraulic engineers from as far away as San Francisco and Paris, France; members of the Engineer Corps of the United States Army, representatives of the War Department and the Federal Power Commission, water power officials, representatives of railroads and others. It was a highly representative gathering, among the attendants being many men of eminence in their professions, and the serious purpose was manifest to coordinate efforts to bring about not only a full and scientific development of southern water powers, and auxiliary steam plants, with adequate transmission lines, but also the development of all southern resources, mineral, timber, etc.; to foster reforestation plans as a means of preserving the forests for a future timber supply as well as to prevent soil erosion and the silting up of impounding reservoirs. Also the importance of educating the people against the baneful effects of inimical and unwise legislation was strongly emphasized as among the activities in which the conference can advantageously engage. The development of inland waterways and the improvement of harbors was also urged as a matter of the greatest importance in connection with the development of southern resources.

The objects and aims of the conference are set forth in detail in the report of the committee on resolutions, adopted unanimously, as follows:

"The ultimate object of water power development and use is to aid in the creation and maintenance of industries which are essential to the general prosperity, and that such general prosperity is part of and parcel with the preservation and improvement of standards of living in American homes which create the best citizenship. Therefore, this Conference endorses the effort for the extension of a Federal policy of land reclamation and settlement, co-operating with State and local activities to increase the number of small self-supporting farm homes, such as in the past have constituted the basis of our citizenship and the cradle of our government.

"A well conditioned forest cover is of the utmost value in the prevention of erosion and the consequent protection of reservoirs and streams from destructive deposits of silt, and that unburned forest cover on the clay and clay loam soils of the southern Appalachian region has an important effect on the regulation of stream flow, therefore, we especially urge the Director of the Budget of the United States to recommend in his next budget to the Congress that the original appropriation of two million dollars a year for the purchase of forest lands on the headwaters of streams, as provided by the "Weeks' law," be restored, and we also urge the Congress to restore said original appropriation. We also urge upon the Director of the Budget and upon the Congress the necessity for increasing the appropriation for co-operation with the states in forest fire prevention under the 'Weeks' law' to at least one million dollars a year, and we urge the legislatures of the several states of the Southern Appalachian region to make adequate and early provision for state forest protection through properly organized and adequately supported forestry departments.

"There is an unfortunate tendency in certain states to enact restrictions and hamper legislation respecting water power development and operation, such as for example the contemplated legislation against the transmission of electric power beyond state boundaries. Such legislation is destructive and prevents the development of our water power sites in public interests, it curtails the market for power by limiting the distance over which power may be lawfully transmitted. We cannot speak too emphatically of the utter folly of such unwise legislation and other destructive measures which retard development.

"Certain of the Southern Appalachian states, and notably North Carolina and Tennessee, have provided liberally for investigation of water power resources. Other states of the union have also established agencies through which there might be made known to the citizens the water power resources and the logical conditions under which they may be developed. We view with regret the departure of one of the states of the union from this wise program, and we commend the states of North Carolina and Tennessee for their wise action, and urge that all the other states of the Southern Appalachian group enact laws of similar purport.

"The Legislative Committee of this Conference is hereby urged to consider and to take appropriate action at the earliest possible date concerning laws of various states of the Southern Appalachian group relative to the taxation of standing timber and of water power development. Growing of timber should be encouraged by relieving the standing timber from annual taxation as far as possible, taxing only the land itself and the timber when it is harvested.

"We also believe that public utility properties, especially hydro-electric properties, have too often been regarded as the legitimate source of quickly and conveniently raised tax income, and while we do not favor any inequitably low taxation of such properties, we believe that the logic of things necessitates the revision of now popular ideas concerning this matter, and that it be more thoroughly understood that the high taxation of a public utility property means not only the discouragement of subsequent development of such properties, but also that the ultimate consumer, and he alone, pays the extortionate tax.

"The extending to the inland waters of the United States, particularly the great Mississippi River system and the navigable rivers in the southeastern slope of the Appalachian Mountains, conditions of water transportation equivalent to those existing in water transportation from the Panama Canal will permit a cheaper distribution of the products of the Southeast to an extended market. The building of ports

where loading and unloading of vessels can take place economically is a necessary step in order successfully to develop this empire of inland water transportation. The first step is to make navigable throughout the year the main tributaries of the Mississippi and of the southeastern rivers which tap the industrial and agricultural centers of the Southeast. The building of power navigation dams is the logical step in this development where topographic conditions permit. In the last decade or two the improvement of hydro-electric development has increased so rapidly and is now of such outstanding importance, that it merits consideration which was unjustified only a few years ago. Of the navigable rivers in the southeastern United States, many have valuable hydro-electric possibilities. It is the opinion of this Conference that in river improvement, both hydro-electric development and improvement for navigation should receive full consideration. On several important navigable streams of the country the government has so drawn its plans and executed its works, that valuable hydro-electric plants have been developed in conjunction with and to a marked additional benefit of existing or proposed navigation improvements.

"This Conference desires to express its highest commendation of this enlightened policy and to urge that it be continued and amplified on the navigable rivers and their tributaries having their source in the Southern Appalachian mountains.

"The early and full development and effective use for the benefit of the public of the water resources is being retarded by popular ignorance of the subject, resulting in unwise legislation ultimately adding to the burdens of the consumer. Such ignorance can be overcome only by education through the public press, and by action by Chambers of Commerce and similar organizations."

Plans and methods of undertaking the important work the Conference has in mind were set forth in the report of the Executive Committee. In adopting this report it was voted to slightly change the name of the organization as adopted at the first meeting in Asheville in June, 1922. The word "Water" was dropped, so that instead of Southern Appalachian Water Power Conference, the name is now the Southern Appalachian Power Conference. The report of the Executive Committee as adopted is as follows:

"The Executive Committee of the Southern Appalachian Water Power Conference has been carefully considering the best methods by which the conference maay function to promote a logical development of the natural resources of the Southern Appalachian States, including water power, minerals, forests and agriculture. After due thought and discussion the committee has formulated the following expression of policy.

"1. The Southern Appalachian Power Conference is an organization of state commissions, public utility companies, engineers, bankers, industrial or commercial interests and individuals concerned with the development, operation, regulation, and utilization of power projects and industries dependent upon them, in natural resources, in flood control, and water resources, and in forest conservation in the Southern Appalachian States.

"2. The Conference is committed to the policy of wise and beneficial development and conservation of the great water powers, forests and other natural resources of the Southern Appalachian States. To effect this object it proposes to act as principal in carrying out the following undertakings:

"(a.) To effect a more harmonious relation between public utilities, public service regulatory bodies, and the general public. In furtherance of this purpose it is proposed to establish a Bureau of Public Relations. This Bureau will prepare accurate information as to the power developments, the market supplies, the availability of power, the restrictions on use of power, and other information relating to developed power, and see that such information is properly supplied to the press and public generally. The Bureau will in general act as publicity agent for the dissemination of accurate information relating to the power industry in the South.

"(b.) To provide a bureau to furnish accurate information relative to power, and natural resources, and to supply such information to industrial and commercial organizations, engineers, bankers, etc. In furtherance of this purpose it is proposed to establish a Bureau of Industrial Development. This Bureau will inaugurate a thorough investigation of the water powers, forests and other natural resources of the region, making use at first of information already available from such sources as the State Geological Surveys, conservation commissions, chambers of commerce, power companies, railway development agencies, etc. It is essential in this connection that all the interests involved freely contribute their information to the Bureau. The Bureau will then endeavor to approach interests outside the States, indicating where specially desired facilities for industry or commerce are to be found, and serve as a general accurate source of information relative to the proper exploitation of the great natural resources of the South.

"(c.) To provide a means of compiling information relative to the scientific facts needed in the development of natural resources, it is proposed to establish a Bureau of Research. This Bureau would compile the large amount of existing data relating to rainfall, evaporation, run-off, power problems, and natural resources, etc., now widely scattered and by making it available to all would eliminate much duplication and provide needed information. The Bureau would carry on investigations suggested by the Conference and in general coordinate the activities of the existing special committees.

"The Executive Committee proposes to immediately develop these bureaus on a functioning basis. Their operation would necessitate the employment of a full time director who would organize the bureaus with suitable personnel. The director would report to the Executive Committee, which would carry out through him any specific recommendations of the Conference.

"To put into effect this expansion of the activities of the Conference will require practically entire agreement as to cooperation among the several interests composing the Conference and will necessitate a considerably increased budget. The budget for 1922-23 is estimated at $25,000.

"The sum required to carry on the activities of the Conference to be raised by contributions from water power companies, industries utilizing power, railways, chambers of commerce, manufacturing associations, and individuals."

Addresses, committee reports and discussions throughout the three-day session of the conference bore chiefly on the matters embodied in the reports of the Resolutions and Executive Committees. Dr. Joseph Hyde Pratt, director of the North Carolina Geological and Economic Survey, the retiring president of the Conference and the inspiration of the Organization, exhaustively reviewed the work accomplished and outlined the activities with which the Conference can advantageously identify itself in the future.

Col. Edgar Jadwin, of the U. S. Army, Corps of Engineers, headquarters at Charleston, S. C., represented Dwight F. Davis, Assistant Secretary of War, who found it impossible to be present. Col. Jadwin, detailed some of the activities of the War Department in cooperating in water power development, and pointed out that district officers present included Maj. J. O. Kuntz, Charleston, S. C.; Col. D. D. Pullen, Norfolk; Col. J. J. Toning, Montgomery; Col. Harold C. Fiske, Chattanooga.

At a get-together meeting Monday night Frank E. Baum, of San Francisco, gave an illustrated lecture showing the possibilities of establishing twelve power districts in the

United States and tying them up in a closely related national power system. Statistics covering practically every phase of hydro-electric power development, transmission and use were shown in the elaborate charts Mr. Baum presented.

As chairman, H. T. Wills, of Atlanta, presented the report of the Committee on Energy Supply, followed by discussion in which M. B. Hall of Atlanta, took the lead. In this discussion Prof. C. E. Ferris, of the University of Tennessee, Knoxville, suggested the Diesel engine as a possibility for auxiliary power plant installation. While the Diesel engine is now built in small power units, generally only up to 1200 or 1400 horse power, yet one is now being built in Europe of 7000 horse power, and he had been assured by builders that 10,000 horse power would not be difficult of construction. He showed that 60,000,000 horse power would run all the railroads, street cars and utilities and 70,000,000 run all the industries, whereas there were 300,000,000 horse power in the automobiles of this country. He declared that water power owners might very well consider the feasibility of installing units of Diesel engines in place of steam plants.

Forestry and its relation to navigation and water power was handled in a report by J. S. Holmes, state forester. W. W. Ashe, district forester, U. S. Forest Service, Washington, D. C.; W. J. Danstoft, of the Champion Fibre Co., Canton, N. C.; H. S. James and others pointed out the great value of reforestation, especially to the Appalachain region, where erosion occurs more extensively on unnoval or forest covering than in almost any other section of the United States.

P. A. Tillery, of Raleigh, in making a report on Interconnection of Energy, described the superpower system of the Southeastern states, which he declared to be more complete than that of any other section, and which is being constantly extended.

A. J. Maxwell, of the Corporation Commission, Raleigh, and Prof. Thorndyke Saville, Hydraulic Engineer, University of North Carolina, discussed desirable and undesirable state and Federal Legislation.

O. C. Merrill, executive secretary of the Federal Power Commission, spoke of the cooperation given by the government to power development, which is proceeding more extensively now than in any previous era.

Suggestions as to future policy of the Conference were made by M. O. Leighton, Consulting Engineer, Washington, and Chas. A. McKeand, Economic Engineer, Seaboard Airline Railway, Savannah, Ga.

Col. Harold C. Fiske, Chattanooga, spoke of the effort to get an appropriation of $515,800 for a comprehensive survey of the Tennessee basin. Congress gave $200,000, which would make it necessary to select only the projects that will give most immediate results. If the people of Asheville and this vicinity are prepared to carry out the improvement if found feasible, Col. Fiske would go ahead with a survey for a $10,000,000 project on the French Board. There are four or five cases of about the same character, which will be taken up if a serious intent is shown.

In presenting his report as Chairman of the Executive Committee, Wilbur A. Nelson, state geologist of Tennessee, declared that as the development of the West had enabled the country to meet the Civil War debt so would the development of the South enable the country to meet the burden of the World War debt.

A feature of the program was an address by Geo. H. Matthes, aerial photographer, of Chattanooga, who described the accuracy of aerial photography for survey maps. Examples of the work were shown, and it was pointed out that for location lines photography was ideal, also, it did not arouse a neighborhood to hostility or extortionate land values, as is frequently the case when a corps of surveyors invades a community of farmers or land owners. The airplane view enables a line to be run with accuracy and dispatch, and a right of way is usually secured in short time and at reasonable cost.

In the election of officers for the current year the following were chosen:

President—H. T. Wills, Atlanta.
Vice-President—Col. Edgar Jadwin, Charleston, S. C.
Treasurer—Prof. Thorndyke Saville, Chapel Hill, N. C.
Secretary—J. A. Switzer, Knoxville, Tenn.
Chairman Executive Committee—Dr. Joseph Hyde Pratt, Chapel Hill, N. C.
Chairman Energy Supply Committee—P. A. Tillery, Raleigh, N. C.
Chairman Legislation Committee—Wilbur A. Nelson, Nashville, Tenn.
Chairman Forestry Relations Committee—J. S. Holmes, Chapel Hill, N. C.
Chairman Finance Committee—To be named by the President.

Providence, R. I., and Asheville have extended invitations as the meeting place for the next Conference.

## $4,500,000 IRRIGATION PROJECT FOR WEST TEXAS.

### Expect to Create Drainage District Affecting 200,000 Acres—Plan 2000-Foot Dam 100 Feet High.

Arrangements will probably be completed soon for calling an election to create the Coke-Runnels Water Improvement District No. 1 in furtherance of one of the largest irrigation projects yet contemplated in West Texas. This project is being pushed by the Colorado Valley Irrigation Association of Ballinger, Tex., who wire the MANUFACTURERS RECORD:

"Petitioning for election to create Coke-Runnels water improvement district No. 1, affecting 200,000 acres adjacent Ballinger, Bronte and Miles. State Water Board to hold hearing July 1. Creating of district assured. Propose to erect concrete dam Coke County, 2000 feet long, 100 feet high, impounding over half million acre feet of water in reservoir thirty miles long and four miles wide. Approximate cost project $4,500,000. Attorney, John W. Gaines, San Antonio. Consulting engineers not yet selected, but C. C. Holder of Bronte is acting."

The site for the proposed dam is stated to be 28 miles northwest of Ballinger, while the drainage area above the proposed reservoir lies in thirteen West Texas counties and comprises 8000 square miles of watershed.

## Increase of 24 Per Cent in Petroleum Production.

From January to May, inclusive, 276,107,000 barrels of petroleum have been produced, reports the Geological Survey. Compared with 221,680,000 barrels produced during the corresponding period of 1922, this is an increase of 54,427,000 barrels, or over 24 per cent.

We have produced in five months almost as much petroleum as was produced during the entire year 1915, and 66,500,000 barrels more than the anual output of the country in 1910.

The South has produced in this five-month period of 1923, 141,905,000 barrels, or over 51 per cent of the country's total petroleum output.

From January to May, the United States consumed 249,988,000 barrels of domestic petroleum and exported 5,189,000 barrels, compared with 165,528,000 barrels consumed and 3,847,000 barrels exported during the same period of 1922.

PRODUCTION OF PETROLEUM BY FIELDS.
(Barrels)

| Field | Jan.-May 1923 | Jan.-May 1922 |
|---|---|---|
| Appalachian | 11,670,000 | 11,964,000 |
| Lima-Indiana | 696,000 | 917,000 |
| Illinois & S. W. Ind. | 4,007,000 | 4,367,000 |
| Mid-Continent | 134,794,000 | 129,351,000 |
| Gulf Coast | 13,550,000 | 14,602,000 |
| Rocky Mountain | 16,394,000 | 10,030,000 |
| California | 94,723,000 | 50,449,000 |
| | 276,107,000 | 221,680,000 |

# The Water Power Situation in the South.*

By Col. Joseph Hyde Pratt.

Since the meeting of the Southern Appalachian Water Power Conference in Asheville last June there is considerable change in the attitude of several states toward neighboring states in regard to the transmission of power; in the attitude of water power companies regarding future developments in the south, of corporations and public utility commissions in regard to rates and taxation of water power corporations; and of legislative bodies in considering legislation. There has been a very interesting correspondence between the Governor of New York and the Governor of Pennsylvania in regard to the transmission of power from New York to adjoining states. Alabama expects to consider legislation prohibiting the transmission to other states of hydro-electric power produced in Alabama. Several legislatures have considered the method of appraisal of the property of water power corporations for taxation and rates to be charged by the power companies, and questions relating to supervision of development and expansion. States are giving attention to questions relating to the jurisdiction of the Federal Power Commission on streams that are not navigable under the ordinary use of the term; and legislation has been suggested that water powers developed under the Federal Power Commission bill shall revert to the states rather than the Federal Government in case the leases are not renewed.

Many of these questions have been discussed in newspapers and emphasize the need of legislation regarding the control and protection, as well as the development, of water powers of the country.

It is not believed that it would be wise legislation for any state to pass a law prohibiting the transmission of hydro-electric power developed in one state to another state, any more than it would be reasonable for a state to pass legislation to prevent the distribution of coal mined in one state to another state. New York, with its wonderful source of hydro-electric power, should not consider that power as belonging exclusively to the state of New York and that none should be transmitted to Pennsylvania any more than Pennsylvania should consider the coal deposits of that state as belonging exclusively to Pennsylvania, and that no coal should be shipped to New York or the New England states. These are both natural resources in which the country as a whole is vitally interested, and which must be developed and utilized in the interest of the country as a whole.

North Carolina has been interested in hydro-electric power development in Alabama, and through the medium of the Georgia Railway and Power Company and the Southern Power Company has been able, indirectly, to obtain power from Alabama, which enabled the Carolina Power and Light Company of Raleigh, N. C., to furnish its customers with power. North Carolina is transmitting out of the state all the power developed at the Cheoah Dam on the Little Tennessee River, which is used by the Aluminum Company of America at plants in Tennessee; but we are at the same time having power transmitted into North Carolina from powers developed in South Carolina. There is, however, an interstate interest in these power plants of South Carolina, inasmuch as the source of their water supply is in North Carolina, and the protection of this source is the protection and conservation of the forests on the headwaters of these streams.

The consideration by the Congress of the United States and by several of the states of working out sane legislation regarding the most efficient way of developing the power of a stream will, it is believed, result in the end in having surveys made of many of our river basins to determine what is the most efficient and economical way of developing these streams. There has been too much tendency in the past to investigate and develop power at some point on a river without any reference to other possibilities of power development on that stream. There has also been a tendency to investigate the question of navigation of certain streams without any consideration as to power that might be developed and utilized in connection with the development of the stream for navigation. The investigation of the Tennessee River and its tributaries, made possible by the appropriation of the last Congress, will consider all phases of the situation and prepare plans and estimates regarding the development of the river for navigation, the prevention of floods, the regulation of flow of the river, and its tributaries, by storage reservoirs, the development of water powers at suitable points along the river, and will work out and make suggestions as to what would be considered the most feasible and economical method of developing the river so as to ensure the fullest usage of all economic units of that river.

The North Carolina Geological and Economic Survey is investigating the Deep River, which presents a unique problem in regard to storage for the several powers already developed on the river, and the location of an auxiliary steam plant. At the present time several plants on Deep River are all forced to maintain duplicate steam systems. None of them have any adequate storage, and their small storage reservoirs are now completely filled with silt, so that they are dependent on the flow of the river for power. In its investigation, the Survey will consider the Deep River as a unit to be developed into a self-sustaining and coordinating power area which will be unique in industrial North Carolina. The headwaters of the river are being studied in connection with the establishment of storage reservoirs, which would be of benefit to the power needs of the river as a whole. Plans are also being considered for the erection of transmission lines between the plants and the erection of a single steam plant as a means of economically supplementing the water power when necessary. If the river had been considered in this way before the several small water powers were developed, the river's development could have been accomplished much more economically.

Railroads becoming interested in this idea of investigation of a river basin, inasmuch as there is a decided relation between the development of transportation facilities and water powers within the area. Both can be developed, and one should not be developed at the expense of the other unless a thorough survey and investigation has demonstrated that it is more economical to develop a specific one than the other.

North Carolina has a case in point in connection with the consideration of the railway into the so-called Lost Provinces of northwestern North Carolina. Attention has been called to the need of investigating and surveying at the same time the question of water power development along the rivers near which the railway may have to be constructed.

Municipalities are also becoming interested in water power development as a means of enabling them to furnish power to industries that are ready to erect plants within the municipalities if power can be furnished.

Our rural communities and farming sections are also interested in this question of electric power development, and in many sections of the Southern Appalachian region there is sufficient water power waiting to be developed into electric power to light every home and furnish power to cook the food, draw the water, supply the ice, run the dairy, cotton

* Address at the Southern Appalachian Water Power Conference, Asheville, June 25-27.

gin and mill in these communities; and yet at the present time there are many men and women working on the farms in some rural settlements without these advantages, when they could easily arrange to attain them if rightly directed. This can be remedied in one or more ways: by the development of the small water powers and arranging for interconnection of all under one general management for a given area or community; or by the city, town or community underwriting the cost of transmission lines from the lines of the water power corporations that have developed the larger water powers.

Manufacturing industries are constantly making inquiries regarding the location of undeveloped water powers suitably located for development and use in connection with manufacturing plants. The desire of many of the New England cotton mill operators to secure adequate sites for mills in the South in often predicated upon obtaining a water power site of sufficient magnitude to enable them to develop their own power. Only in exceptional cases will this be possible, but there is plenty of power to be developed by companies now in the field, or by co-operation of cotton mills in developing large water powers and transmitting power to their several mills. If the South will prepare itself to handle in the right way the cotton mill migration from New England, it will thus, I believe, attract the attention of other manufacturing industries, such as boot and shoe manufacturing plants, woolen mills, etc., to this section of the country.

One of the problems that has to be given careful consideration is that relating to labor, but it is believed that it will not be necessary to import Northern mill labor, which so far as can be ascertained the mills are trying to get away from, as it has been conclusively demonstrated that the people of the Southern Appalachian states are capable of learning and becoming skilled in all forms of work that is demanded by even the most intricate work in the cotton mills. While this labor will of course be drawn largely from the farms, it is believed that a plan of land settlement can be devised by which there can be built up around the mills a stable population which will be represented by owners of small farms, which will be able to supply many of the necessities of life to the mill villages.

Very few, if any, water power companies are so situated that they can develop all the power that they need and have contracted for without the need or use of auxiliary steam plants; and here again is a splendid opportunity for co-operation between power companies, either interstate or intrastate. Such co-operation should be given very serious and careful consideration in order to determine whether central co-operative auxiliary steam plants cannot be established which will furnish the necessary additional power needed by the various water power companies to supplement their hydro-electric power. Questions of location of such plants, fuel to be used, etc., should all be carefully investigated and the information recorded and kept at the disposal of all interested parties. Coal, gas, oil and peat auxiliary steam plants are possibilities throughout the Southern Appalachian region, and should be carefully studied.

I wish to refer to a possible central auxiliary steam plant being established in the Deep River coal field of Moore, Chatham, and Lee counties, North Carolina, where the plant will either utilize run-of-mine coal, or gas produced in coking the coal. Deep River would supply sufficient water for the plant; and it is believed that such an auxiliary plant could readily tie in economically to transmission lines in the vicinity.

The peat deposits of the Coastal Plain region of North Carolina offer another possibility of fuel for auxiliary steam plants.

Another problem in connection with the water power situation in which all water power companies are interested is the protection of the forests on the headwaters of the streams upon which the water powers are located. It is readily conceded that it is absolutely impossible for a water power corporation to control and protect all the forested areas on the headwaters of those streams upon which they have developed water powers. It is recognized by all that the protection of these watersheds is of vital importance to the conservation of the water power. A thoroughly forested watershed will prevent much silt being carried down by the streams, and there is record of many storage reservoirs above which there is no cultivated land, which have been in service a number of years and which show little or no signs of silting at the present time. We also have record of storage reservoirs that are below large areas of cultivated lands where the reservoirs are entirely filled with silt, leaving only a channel in some instances for the river to flow through. Many areas are susceptible to reforestation, and the co-operation of state, power company, and individuals is necessary to bring about its accomplishment.

It is also generally conceded that forested areas do undoubtedly affect stream flow by reducing the high peak of floods, increasing the flow during droughts, although slightly reducing the total annual run-off. If the flow of the stream can thus be increased during dry periods even though only by a small percentage, it does have a decided influence on water power development. The reduction of the peak during floods would likewise be of benefit to the water power companies because a large proportion of the flow could be utilized, and the damage caused by high floods could be reduced.

Thus it is undoubtedly to the interest of all those who are connected with water power development, whether producer or consumer, to have as large a percentage as possible of forest cover on the catchment area. It is not, as stated above, possible for the water power companies to control and protect the large areas of forests that it is desirable to have on the upper waters of our streams; and yet this is possible by co-operation between the companies, the states, the federal government, and individuals.

The state is particularly interested in the conservation and development of water powers on account of their influence on the establishment of industries in the areas accessible to the power. Each is dependent upon the other for the best and most efficient development and utilization of water powers; and there should be a close co-operation between the two in all matters in any way relating to investigations, development and conservation of these powers. This is particularly true in regard to measurement of stream flow; maintenance of stream gaging stations, many of which are maintained by power companies and many more maintained by the state and federal governments. There should undoubtedly be an interchange of information collected by all these agencies in regard to stream measurements because it is of value to all interested in water power development. The work of the Weather Bureau of the Federal Government and the work of the State Survey in co-operation with the Weather Bureau in collecting and studying rainfall data is also of interest and value to water power companies and all others who are in any way interested in water power development. It is practically impossible for water power companies to obtain such data except through the federal and state agencies; but they can co-operate locally by assisting in the reading and maintenance of Weather Bureau stations in certain sections in which their water powers are located.

Another problem that is constantly confronting water power companies and corporation and public utility commissions, is that relating to legislation, regulations and rates. The people of the country have begun to consider water power as a national asset in which the people as a whole have an inherited and inherent right, and that water power is not

an asset which can be controlled entirely by the individual.

Legislation and regulation however must be fair, just and equitable to all parties, both to the people, the consumer and to the producer. Power companies must be ready to give fair and accurate information regarding the expenditures for construction, operation and maintenance of the power, and the people, through their legislative and corporation commissions, must be willing to permit the power companies to earn an adequate return on their investment comparable with returns earned by other industries. Consumers must be considerate in their demand for rates, and take into consideration that they are procuring power at a much cheaper rate than they could produce it themselves; that in many instances they would rather pay a higher rate than be without such power; and that in many instances their corporation is earning several times more interest on the invested capital than the water power companies are earning on their invested capital.

The above problems relating to the water power situation in the South can, it is believed, be solved and more readily solved than in any other way, by an organization such as the Southern Appalachian Water Power Conference, if developed along the plan to be considered at this Conference.

As recommended by the executive committee, the plan is briefly as follows:

1. The Southern Appalachian Water Power Conference is an organization of state commissions, public utility companies, engineers, bankers, industrial or commercial interests and individuals concerned with the development, operation, regulation and utilization of power projects and industries dependent upon them.

2. The Conference is committed to the policy of wise and beneficial development, utilization and conservation of the great water powers, forests and other natural resources of the Southern Appalachian States. To effect this object it proposes to act as principal in carrying out the following undertakings:

*a*—To effect a more harmonious relation between public utilities, public service regulatory bodies, and the general public. In furtherance of this purpose it is proposed to establish a Bureau of Public Relations. This Bureau will prepare accurate information as to power developments, the market supplied, the availability of power, the restrictions on use of power, and other information relating to developed power, and see that such information is properly supplied to the press and public generally. The Bureau will, when requested, act as mediator in disputes when such disputes do not relate to rates. The Bureau will in general act as publicity agent for the dissemination of accurate information relating to the power industry in the South.

*b*—To provide a bureau to furnish accurate information relative to power, and natural resources, and to supply such information to industrial and commercial organizations, engineers, bankers, etc. In furtherance of this purpose it is proposed to establish a Bureau of Industrial Development. This Bureau will inaugurate a thorough investigation of the water powers, forests and other natural resources of the region, making use at first of information already available from such sources as the state Geological surveys, conservation commissions, chambers of commerce, power companies, railway development agencies, etc. It is essential in this connection that all the interests involved freely contribute their information to the Bureau. The Bureau will then endeavor to approach interests outside the states, indicating where specially desired facilities for industry or commerce are to be found, and serve as a general accurate source of information relative to the proper exploitation of the great natural resources of the South.

*c*—To provide a means of compiling information relative to the scientific facts needed in the development of natural resources it is proposed to establish a Bureau of Research. This Bureau would compile the large amount of existing data relating to rainfall, evaporation, run-off, power problems, and natural resources, etc., now widely scattered, and by making it available to all would eliminate much duplication and provide needed information. The Bureau would carry on investigations suggested by the Conference and in general co-ordinate the activities of the existing special committees.

The Executive Committee proposes to immediately develop these bureaus on a functioning basis. Their operation would necessitate the employment of a full time director who would organize the bureaus with suitable personnel. The director would report to the Executive Committee, which would carry out through him any specific recommendations of the Conference.

To put into effect this expansion of the activities of the Conference will require practically entire agreement as to co-operation among the several interests composing the Conference and will necessitate a considerably increased budget. The budget for 1922-23 is estimated at $25,000.

The revenue required to carry on the activities of the Conference to be raised by contributions from chambers of commerce, industrial and commercial associations, water power companies, industries utilizing power, railways, and individuals.

## Texas Adopts More Liberal Compensation Law for Workmen—Designed to Avoid Damage Suits.

Austin, Tex., June 21—[Special.]—On June 14 the amended workmen's compensation law went into effect. It is the only act which was backed by organized labor of Texas passed at the recent regular session of the legislature. The new law is intended to put damage suit lawyers out of business. It will also increase the compensation of injured workers, it is explained. George M. Slater, president of the Texas State Federation of Labor, in discussing the more important features of the law said:

"A man's life under the new law is valued at $7200, as against the $5400 of the old law. His eyes are worth $8020, or more than his life, as against $6000 by the old law.

"It marks a long step forward for Texas and means much to the ordinary workman and his family in case of serious injury.

"Under the old law the injured workman was entitled to receive reasonable medical aid, medicine and hospital service for a period of two weeks. Under the new law this limit is increased to four weeks. Under the old law only husband, wife and minor children could recover compensation as beneficiaries without proving dependency. The new law includes parents and stepmother.

"Another vital change is this: Under the old law, where a beneficiary established dependency and later ceased to be a dependent, having received, say, a total of 100 weeks' compensation, the insurance company could go before the Industrial Accident Board and the remaining 260 weeks' compensation would lapse. The amended act provides the rights of a beneficiary shall be established according to the facts as they exist at the time of the death of the injured person and shall be a complete, absolute and vested right and the full amount of compensation first awarded must be paid.

"The law formerly provided that an injured person should receive 60 per cent of the average weekly wages, but in no case less than $5, nor more than $15, while the amendment provides for a minimum of $7 and a maximum of $20, an increase of 23-1/3 to 40 per cent. These increases were based on United States Department of Labor data on the increase of the cost of living from 1913 to 1922.

"This law is written to protect the worker against the damage suit lawyer, and no lawyer is needed to put through a claim under the new law. A lawyer is the last person needed in a compensation case."

## New $300,000 Church for Tampa—Site Purchased.

Tampa, Fla.—A site has been purchased by St. Andrew's Episcopal Church at the corner of Hyde Park avenue and De Leon street, where it plans to erect a $300,000 church building, parish house and rectory. The property measures 245 by 145 feet and is one block from the bay. Dr. C. E. Pattillo is the rector of the church.

# Coercion of State Banks by Reprisals of Federal Reserve Board.

## GROWING MENACE IN CENTRALIZATION OF FINANCIAL AUTOCRATIC POWER.

By L. R. ADAMS, General Secretary, National and State Bankers Protective Association.

According to press reports the Federal Reserve Board has ordered a system of reprisals in the par clearance controversy. This presents a very remarkable, if not alarming, situation, when a semi-governmental agency of which the Supreme Court has said: "But this is not private business. The policy of the Federal Reserve Banks is governed by the policy of the United States with regard to these relatively feeble competitors"; when curbed and checked in their policy and practice by three decisions of the Supreme Court of the United States, resorts to reprisals against a certain class of our citizens in order to compel those citizens to bow to their will and acquiesce in a system of doing business which the Supreme Court has said is not required by the law and is contrary to the express provisions of the Federal Reserve Act.

Just at this time it happens to be a section of our citizens known as country banks which are singled out for these "reprisals," but should any other class of citizens or business or profession similarly resist a usurpation of authority by the Board it is just as reasonable to expect that the Board will resort to reprisals against them as to have expected such reprisals here. If, as the Supreme Court of the United States has said, the policy of the Federal Reserve Banks is the policy of the United States, we find the government arrayed against a portion of its citizenship, seeking to accomplish by reprisal that which under the law they have no right to demand; and with this phase of the matter all citizens are vitally concerned. Shall this spirit which, thru a prostitution of its powers, would destroy what it cannot control be permitted to flourish rampant in this country? Bolshevism is no more serious menace to the institutions of a free people than is governmental reprisal against any class of citizens openly admitted and frankly carried out.

With the par clearance controversy as such we have always maintained that the public had but little interest and this is borne out by the statement of the Supreme Court in these cases as follows:

"Par clearance does not mean that the payee of a check who deposits it with his bank for collection will be credited in his account with the face of the check if it is collected. His bank may, despite par clearance, make a charge to him for its service in collecting the check from the drawee bank. It may make such a charge although both it and the drawee bank are members of the Federal Reserve System; and some third bank which aids in the process of collection may likewise make a charge for the service it renders. Such a collection charge may be made not only to member banks by member banks, national or State, but it may be made to member banks also by the Federal Reserve banks for the services which the latter render. The collection charge is expressly provided for in section 16 of the Federal Reserve Act (38 Stat. 268) which declares that: 'The Federal Reserve Board shall, by rule, fix the charges to be collected by the member banks from its patrons whose checks are cleared through the Federal Reserve bank and the charge which may be imposed for the service of clearing or collection rendered by the Federal Reserve bank.'"

But par clearance is but an incident to the controversy. The real issue is bigger and broader and deeper than that. It relates to the purposes behind it all and of which the Supreme Court of the United States has said:

"For the service rendered by the drawee bank in so remitting funds available for use at the place of the deposit of the check, it was formerly a common practice to make a small charge, called exchange, and to deduct the amount from the remittance. This charge of the drawee bank the Federal Reserve Board planned to eliminate and, in so doing, to concentrate in the twelve Federal Reserve banks the clearance of checks *and the accumulation of the reserve balances used for that purpose.*"

This purpose, if accomplished, would concentrate in the federal reserve banks practically all the banking reserves of the United States and give them a degree of control over the banking resources of the United States which it is alarming to even contemplate.

This purpose has often been denied, but in the argument before the Supreme Court in the North Carolina par clearance case it was frankly admitted by Hon. Henry W. Anderson, leading counsel for the Federal Reserve Bank of Richmond. In his closing argument before the Supreme Court, Mr. Anderson said, as stenographically reported:

"Now, if your honors please, I have not had an opportunity to review, as we have reviewed in our brief in this case, the facts leading up to this legislation. But as a matter of fact, it must be obvious that this particular controversy is the concluding act, we might say, in a long controversy on the subject of State or National control of the banking system of the United States. It has varied from time to time in this country.

"First, there was the period of National control up to 1835; then the period of State control up to the Civil War; then the gradually growing period of National control, until it culminated in the enactment of the Federal Reserve Act, which was intended to place the reserve organization of the banks of the country in the Federal Reserve banks, to concentrate them, where they would be most available, and as an incident of that, to allow these banks to clear at par and relieve the country of the great burden incident to this exchange charge, so-called—which was no longer necessary, owing to the change in economic and commercial conditions.

"That was a part of the general controversy which has been going on in this country from the formation of the Government, on the question as to whether State or National control should prevail. The Constitution creates a complete commercial system; the control of interstate commerce, and the control of the financial system, both through positive provisions prohibiting the states from issuing bills of credit and things of that kind.

"It took the Civil War to establish the control over the political agencies of Government, the separate National control. It has taken 100 years of the decisions of this Court to establish control over interstate commerce; and the financial system is an essential element of that controversy; and this controversy is the culmination of the development of that control for more than 100 years.

"There may be individual cases of hardship; but the general interest of the country required the establishment of a National control over the important agencies of commerce, of which the banking system constitutes a part; to the end that this country may be equal to the emergencies of the present and may expand to meet the commercial needs of the future."

Remember who it was speaking. It was the leading counsel for the Federal Reserve Bank of Richmond—speaking before the highest court, making an argument which was the result of long study and thorough preparation. It was no impromptu utterance made off hand at an unguarded moment, but a deliberate argument indicative of the theory and purposes of the system, and made to the Supreme Court because he believed that the Court, being an arm of the Federal Government, would lend countenance and sympathy to such a purpose.

He was the official designated spokesman, selected for his ability to represent them—and his words must be given the weight of an official declaration.

This then brings the issue squarely before the people. Is the State bank system of this country which has always been larger in point of capital, surplus, deposits, loans, and

number of people served than the National system and which continues to grow faster than the National system, to be driven under the yoke of Federal control by a "system of reprisals"?

During the past few years we have seen the concentration of power in Washington grow to an amazing and alarming extent and we have seen spring from that control a multitude of evils which threaten the peace, prosperity and happiness of our people. And now if through a "system of reprisals" control of all of the banking resources of the United States, and consequently of all of the monied wealth of 110,000,000 people, can be concentrated in the hands of eight men in Washington, and that control to be used by them for whatever purpose they may desire including reprisals, then all of the concentration of power which has gone before is insignificant compared to the possibilities of harm which may come to this country out of such a situation.

Of course, it is evident that, by having to resort to reprisals in the face of the decisions of the Supreme Court of the United States in these cases, this constitutes an admission by the Board of their complete defeat in this litigation and their total lack of power under the law to accomplish what they have set out to do.

So far as the instructions to reserve banks to decline to handle checks which are drawn on banks which do not remit at par is concerned that is merely carrying out the law as it has always existed and as we have all along contended and to establish which four noted lawsuits have been inaugurated and carried to a successful conclusion. But so far as the remainder of the regulation is concerned, particularly that portion which is denominated a "system of reprisals," we do not think that it rests upon any more secure legal foundation than did their previous attempts along this line and it must inevitably result in extremely unpleasant complications between member banks and the Federal Reserve System. In their decisions the Supreme Court made the duty and the power of the Federal Reserve System in the matter of the collection of checks perfectly plain, and, if the Federal Reserve Board had seen fit to undertake to carry out the purposes of the law and the letter and spirit of the Act as set out by the Supreme Court, the whole controversy might have ended in a manner entirely satisfactory to practically all banks and the unfortunate animosities which have arisen out of this controversy in past years permitted to die down and be forgotten, much to the benefit of the system. But this evidently was not their purpose. They have chosen not to meet the situation in the manner pointed out by the Court but rather to resort to a "system of reprisals" not sanctioned nor contemplated by the law. And this involved the whole question of State's rights, the concentration of Federal authority in the hands of a few men in Washington and the matter of the policy of the government itself toward its citizens, and greatly enlarges the number of its opponents. In pointing out the duty and power of the Federal Reserve Board in the matter of the collection of checks, the Court said:

"But neither section 13, nor any other provision of the Federal Reserve Act, imposes upon Reserve banks any obligation to receive checks for collection. * * * Congress did not in terms confer upon the Federal Reserve Board or the Federal Reserve banks a duty to establish universal par clearance and collection of checks; and there is nothing in the original act or in any amendment form which such duty to compel its adoption may be inferred. * * * Moreover, the contention that Congress has imposed upon the Board the duty of establishing universal par clearance and collection of checks through the Federal Reserve banks is irreconcilable with the specific provision of the Hardwick amendment which declares that even a member of an affiliated nonmember may make a limited charge (except to Federal Reserve banks) for 'payment of checks and * * * remission therefor by exchange or otherwise.' The right to make a charge for payment of checks, thus regained by member and preserved to affiliated non-member banks, shows that it was not intended, or expected, that the Federal Reserve banks would become the universal agency for clearance of checks * * * The power of the Federal Reserve Board to establish par clearance was, thus, limited by the unrestricted right of unaffiliated non-member banks to make a charge for exchange and the restricted right of members and affiliated nonmembers to make the charge therefor fixed as reasonable by the Federal Reserve Board."

Checks bearing the endorsements of non-member banks have never been cleared by the Federal Reserve System because of any right or claim of the non-member banks upon the service of the system but they have been cleared by the Federal Reserve system for its mmbers because they had been deposited with such members and because the country bank was a customer of the member bank in exactly the same way and to the same extent as the merchant, manufacturer and the jobber, and entitled to the same services from the member bank; and the service of the reserve system in clearing these checks was for its member and not for the previous holder of the check.

There are a number of legal points and questions involved in these regulations which we prefer not to discuss at this time further than to say that we think that the Reserve Board, with that singular and striking inability to properly construe the law which they have manifested all through this controversy, have again exceeded their power and authority under the law.

We prefer at this time not to prophesy the future course of this controversy further than to say that it is not conceivable that the State banks will tamely submit to any "system of reprisals" and that the present efforts offer no better prospect of ultimate success than did the Reserve Board's previous warfare.

We must not lose sight of the fact, as the Reserve Board seems to have done, that the Supreme Court held that Congress, in passing the amendment to the Reserve Act, gave *member banks* also the right to charge exchange for the remission of checks. The regulations just issued apparently intend to deny member banks this right.

## The Constitution in Pocket Size.

E. C. Atkins & Company, Incorporated, manufacturers of saws, Indianapolis, Ind., inspired by a desire to acquaint the general public with the provisions of the Constitution of the United States, have had printed a number of copies of that document in small pocket form, but finely printed in good type, which they will distribute to any individuals interested, on request. If the publication of the Constitution in this shape will help to increase popular knowledge of and respect for it, the firm will feel that their work in this instance has accomplished something worth while; it will incline to stimulate regard for the fundamental law, the spirit of which is frequently disregarded by persons whose mental attainments should make their actions accord with their obligations.

The firm remark that there is a very real danger to the country in the drift of popular thought away from the principles on which the nation was founded and under which it has attained such a high average of prosperity and general welfare. The foundations of the Republic rest on the principles declared in the Constitution and in many places these are being undermined. Hence the publication of the document in convenient form for perusal in spare moments.

## Bids for Lincoln Hospital to Open August 1.

Durham, N. C.—Bids for the erection of the new Lincoln Hospital here for colored patients will be opened by the building committee on August 1. The building will be three stories high, of fireproof construction and will cost about $150,000. Milburn, Heister & Co., of Washington, D. C., and Durham are the architects.

# The Staple Cotton Co-operative Association.

## HANDLING A BUSINESS OF $25,000,000 A YEAR TO THE GREAT BENEFIT OF DELTA PLANTERS.

By L. N. DANTZLER, JR., Associate Editor, The Staple Cotton Review, Greenwood, Miss.

The Staple Cotton Cooperative Association is now in the second year of its existence. Its field of operations is the alluvial region known as the Yazoo-Mississippi Delta, within the State of Mississippi lying between the cities of Memphis and Vicksburg. It had its inception in a real economic need, and was organized from the bottom upward on a solid foundation as the result of the gradual realization among farmers of the potential power of co-operation. In the past the cotton growers of the Yazoo-Mississippi Delta have been growing their crops purely as individuals, each competing with the other in the marketing of their cotton and without any effective means of obtaining a fair price. Up to the present time the typical Mississippi Delta planter has mortgaged his crop long before the cotton plant has appeared above the ground, and in order to meet his obligations it has been necessary for him to dispose of his crop at the earliest possible moment after the cotton has been ginned.

Because of this continual burden under which the typical planter has been laboring, the cotton trade has become one of the most attractive and fertile fields for speculation. The cotton mill trade of the world has suffered from this situation almost as much as has the cotton planter. The demand for the products of the mills is more or less constant throughout the year, and they must, therefore, secure their raw material in such quantities and at such times as to insure to them an even-running supply during the entire season. Thus we have been confronted in the cotton trade with the dilemma of a constant and to a degree inflexible demand for cotton with the greater part of each yearly supply coming upon the market during two or three months in the autumn. Because of this maladjustment of supply and demand the speculator came into existence. And, aside from the ethical aspects of the question, he has performed a valuable function in assuming the risks incident to the lack of stability in the cotton markets under the time-honored system of dumping. The fault was to be found in the methods of marketing; not with the dealer in futures. The remedy had to be sought through the elimination of the cause of the violent fluctuations, rather than through imposing restrictions upon, or modifying the methods of, dealing on the future exchanges. The abuses of this system have long been generally recognized, but the remedy was not so readily apparent.

During the 1920-1921 cotton season the growers suffered greatly as a result of the reaction from the unprecedented high prices of the preceding season. Many of them, in common with business men in every other line of endeavor, were led to anticipate an indefinite period of almost unlimited prosperity with a normal demand for cotton at probably fifty cents a pound. Hence, at the time of the inception of the idea of forming a co-operative selling organization the conditions confronting the cotton grower of the Delta were particularly auspicious for the success of such an enterprise. The planters were anxious to turn to anything that gave promise of helping them out of their temporary, but nevertheless extremely serious, financial difficulties, as well as becoming a permanent benefit to the entire cotton trade. To meet this situation and to accomplish this end the Staple Cotton Cooperative Association was formed.

During the summer of 1921, in the face of much skepticism, ridicule, and active opposition on the part of some cotton factors and dealers, certain bankers, and planters irrevocably reconciled to the old dumping system, our organization committee secured a sign-up of an average production of 200,000 bales required to make the members' contract effective. Thereupon the Association became an accomplished fact, and on September 5th, 1921, we were ready for business. In the cotton trade our Association was unique, and at that time except in California there were very few successful agricultural co-operatives anywhere in the United States. We were setting out on an uncharted sea in a type of craft the seaworthiness of which under practical conditions was far from proven.

Our avowed principles were:

1. To minimize speculation and waste.
2. To stabilize the cotton markets in the interests of the grower and the public.
3. To market our members' crops in an orderly manner, thereby securing a fair price for the growers.
4. To increase efficiency in the marketing of the crop.
5. To render consistent service to the entire cotton trade.

The adherence to such principles had insured the permanent success of a number of producers' co-operative associations among the fruit growers in the west, and it was our hope and belief that similar policies on the part of our Association would redound with equal benefit to the Yazoo-Mississippi Delta, the cotton trade, and the general public.

Many of the skeptical asserted that an organization of cotton growers would not be able to sell all its members' cotton in a year, and would not do so if it could. Our answer to this was to engage as general manager, Mr. W. M. Garrard, who had long been identified with the cotton trade and who held the confidence and esteem of the entire Mississippi Delta, and to place him in complete charge of our sales department. The task confronting him was indeed an Herculean one. Our members delivered to us the first season 157,865 bales, and it required untiring effort and exceptional resourcefulness to dispose of this cotton in an orderly manner during the season with due regard to the needs of the trade, in which we were entirely unknown and without any established connections.

Our New England agent, whom we maintained in Providence, R. I., was unable to secure any business during the first three months of the season. But before the end of our first year the character of the business offered by us was recognized for its true worth by these buyers and our types and reputation there were firmly established. Much the same experience was had in the other buying centers, both in this country and abroad. At the close of our first season, due to the excellent results accomplished by our selling department, we had sold all of our members' cotton in an orderly manner with due regard to the demand of the trade, selling during any one month not more than 16.45 per cent and not less than 3.16 per cent of our total receipts.

By marketing our members' cotton in this way not a single bale was sacrificed. We sold it as the trade was able to absorb it and at the fair market price at the time of sale. Thus, none of the cotton was dumped on, nor was it arbitrarily withheld from the market, and each of our members, by sharing in the proceeds of all sales ratably with every other member, secured for his crop the fair average price for the entire season. The net proceeds of our first year's business were $20,322,201.62, every dollar of which was accounted for to our membership.

After winding up that year's business we made an interesting comparison of our average prices with those of the average for this and the surrounding territory. The Memphis office of the Bureau of Agricultural Economics of the U. S.

Department of Agriculture receives reports of actual sales of cotton throughout the Memphis territory, which includes Memphis and points in Mississippi and Arkansas. The records thus compiled are official, comprehensive, accurate, and unbiased, being a regular part of the Government's "cotton quotation service," and are available to any interested person who cares to apply for them. Our Association secured from this source the average prices obtained for cotton of a considerable range of grades and staples from August 10, 1921, to May, 13, 1922, being a period of practically forty-six weeks, throughout the territory covered by the Memphis office. Our average prices are computed as an essential part of our accounting operations and constitute the basis upon which final settlement was made with our members. They have been checked and audited a number of times and are absolutely correct, and were made public in printed form at the close of the season.

This comparison of the average prices obtained for the twenty classes of cotton as furnished us by the Government with the average prices for the same character of cotton secured by the Association showed an average difference in our favor of 3.55 cents per pound, or $17.75 per bale. In every instance the difference was in favor of the Association, the highest being 6.36 cents per pound, and the lowest three-quarters of a cent per pound.

The Association's sales are reported to the Bureau and were, therefore, materially responsible for the Government averages against which we compared our individual prices. Hence, the difference in favor of the Association was in reality greater than the bare figures indicate. Moreover, the mere existence and operation of the Association during its first year served to stiffen the general level of prices, and in so doing further raised the average as reported by the Bureau, and brought to Delta growers who were not members of the Association several millions of dollars which otherwise would not have been realized by them.

The above described price advantage secured by the Association has very little bearing on the prices to the mills delivered to the East, to the Carolinas, or to Liverpool. The manufacturers did not pay the differences which we have been discussing. Only an insignificant part of this increase, if any at all, was paid by the mills. But it was definitely lost to the growers outside of the Association. Some of it was consumed in wasteful methods of handling. Some represented profits to buyers. Some of it was dissipated in too many transfers between the producer and the mills.

We emerged at the end of our first season with flying colors. We had developed an organization of over 2200 cotton planters who were willing to pool their resources and unite their influence for their common good; we had received and marketed over 157,000 bales of staple cotton without sacrificing a single bale; we had established an enviable reputation with the mill trade, being required to replace out of our total sales only 1264 bales, or only 0.8 of one per cent; we had paid to our members over $17.75 a bale more than the average non-member had realized on his crop, and we had made our distributions periodically thereby assisting our members to meet their obligations throughout the season.

Our operations were, naturally, far from perfect. We encountered many accounting difficulties in distributing to 2200 persons an average of one and three-quarters millions of dollars monthly and there were some unavoidable mistakes on the part of our classing force. But the most favorable omen of the first year's business, even overshadowing the gratifying prices obtained, was the fact that *co-operative marketing among Mississippi Delta cotton planters had worked!* Fortified with this knowledge and the invaluable experience of our initial and truly experimental year, we faced the opening of the present season and the prospect of seasons to come with much greater confidence in ourselves and in the soundness of the fundamental principles of agricultural co-operation.

So far as we are aware, there has never in the past been an authentic statement published as to the proportion of the Mississippi Delta cotton crop subject to mortgage, but it is traditional throughout the cotton belt that by far the larger part of each year's crop is mortgaged either to banks or to individuals by the time the picking season arrives. From crop mortgages of record on September 1, 1922, we have ascertained that of the total baleage delivered by our members during the current season, 51.35 per cent was not subject to mortgage. To anyone familiar with the situation in the cotton sections in the past this is a revelation and indicates the great progress being made by the Mississippi cotton growers towards placing themselves on a sound financial basis. And we believe that our Association is justly entitled to recognition as materially assisting in this improvement.

As compared with our position in 1921, we entered the second season of our existence with everything in our favor. We were not burdened with any carry-over from our old crop, and everything pointed to a gratifying increase in business, both from the point of view of bales handled and of sales value. By the first of December, 1922, our receipts had passed the total mark set during the preceding year, and since that date we have had turned over to us more than 10,000 bales, bringing our total receipts this season above 168,000 bales.

Probably the greatest advantage we have over our first season is in the superior functioning of our accounting department. Here, naturally, was the chief source of our internal difficulties last year. Under the indefatigable supervision of Mr. O. F. Bledsoe, Jr., President of the Association, this vitally important department has been developed to a degree of efficiency which we believe is not surpassed in any similar organization in America.

Our sales thus far have been consummated in an orderly manner and in amounts consistent with our purpose to liquidate our stock, unless unwarranted by trade conditions, in the season during which it was grown. We disposed of one-half of our receipts during the first five-and-a-half months of the season, and we hope conditions will justify the liquidation of the remainder in a similar manner. To the first of June we had sold 127,000 bales, or 75 per cent of our total receipts for the year. Our sales department has established connections in all the important buying markets of the world, and the reputation established there speaks well for the ability of our management. Of the sales given above 38 per cent went to the East; 26 per cent to the Carolinas; 22 per cent to Southern buyers; and 14 per cent to Europe. The prices thus far obtained have been satisfactory, and with three-quarters of our cotton sold, we are assured of a very gratifying average for the season.

Indications are that when this season's business is wound up and a final accounting made to the members, the value of their current crop will be approximately $25,000,000, or $5,000,000 more than we realized last year.

As soon as our members deliver their cotton to us we advance to them 60 per cent of its "loan value." These "loan values" are ultra-conservative prices fixed for each class of cotton as a basis upon which to perfect our financial transactions with the various agencies from which we secure funds. With three-quarters of our cotton sold we now estimate that 60 per cent of these values represents probably a little less than one-half of what the cotton will actually bring. Therefore, immediately upon receipt of our members' cotton we paid to them just a little less than one-half of its actual value, without having been compelled to sell a bale of it. In this way, without disorganizing the cotton markets through dumping, we provided funds with which the planters could meet their obligations falling due during the ginning season. In

addition to these advance payments made from funds borrowed with the cotton as collateral, we have made regular semi-monthly distributions since October 15 of last year of the proceeds of sales in excess of that needed to retire our loans. These have gone out with unfailing regularity on the first and fifteenth of each month, and mark a decided improvement in our distribution system this year as compared with that of a year ago.

In concluding this account of the organization and progress of the Staple Cotton Cooperative Association it is pertinent to call to the attention of the readers of the MANUFACTURERS RECORD some of the benefits resulting from our existence.

We have relieved our members of the necessity of devoting a large portion of their time to selling their cotton individually to persons who, by virtue of the very nature of their business, had the grower at a decided disadvantage when it came to bargaining. The members have received for the first time the full fair value of their cotton without any dimunition because of glutted market conditions. "Distress cotton" in so far as our members are concerned is no more. We have advanced them a large portion of its value early in the season and are distributing the remainder at regular intervals as the cotton is sold.

We have benefitted in large degree the Delta planters who are not members of the Association through the general stiffening of prices resulting from the mere existence of such a stabilizing factor as is our Association. Many persons are slow to realize this fact, and some non-members have been inclined to consider the better average prices they have obtained during the last eighteen months as resulting solely from natural causes or their own individual sagacity.

We have in no wise attempted to take over the functions of our Delta banks. These banks loan money to their old customers among our membership just as they did in the past, but the cotton is sold through the Association. Every legally recorded claim against members' cotton is recognized in making our distributions, and distribution checks on mortgaged cotton are mailed to the mortgagor, bearing his name as one of the payees. In this way not only is the cotton disposed of to the best advantage by an expert selling agency, but our Delta banks are certain that proceeds applying to cotton against which they have a claim will be forwarded directly to them. The corporation and approval of the banks in our territory in supporting the Association have been virtually unanimous.

We have benefitted the Delta merchants by improving the financial condition of their customers, our members. Moreover, our process of gradual payments every two weeks has served to keep our members "in funds" throughout the year, thereby stimulating retail trade.

The support of the mill trade has been justified through our process of orderly marketing and the consequent tendency toward stabilization in the cotton markets. The heretofore annual appearance of "distress cotton" in the markets has been as disturbing a phenomena to the cotton mill as to the planter. Our efforts toward stabilization are of direct benefit to the cotton mills, for, if they can be assured that cotton similar to that which they purchase early in the season cannot a few weeks later be bought by competing mills at materially lower prices as a result of the appearance of "distress cotton" dumped on the market without regard to the existing demand, much of the risk incident to the conduct of the mill's operations will be removed and the cotton trade as a whole will be benefitted. Moreover, the large stock of cotton controlled by the Association makes it possible for us to accept orders of virtually any size and to fill them in quantities as requested with cotton well up to the description or type upon which it was sold. We are the largest handlers of Delta staple cotton in the world and orders for future shipment are blocked out by our shipping department as soon as sold and set aside to await the date of delivery. The highly satisfactory service which we are rendering to our customers is proven by the negligible amount of claims and rejections which they have made against our shipments.

To the public as a whole we are rendering a number of services. The stabilization of spot prices and of the cotton futures market is beneficial to the public welfare. We are greatly reducing the economic losses incident to the cotton trade in the past. By requiring our members to make deliveries to warehouses promptly after ginning their cotton and by a minimum amount of rehandling, we have been able to reduce the waste from excessive sampling and country damage. Through intelligent attention to the problems of handling and shipping on a large scale we have been able to effect material savings in freight, insurance and the cost per unit for handling.

The Staple Cotton Cooperative Association will within a few years be manifesting its influence in causing the Delta planters to undertake better and more efficient methods of planting, cultivating and picking their crops, and in persuading the trade to adopt more standardized methods of buying and selling. We believe that we are in a very real sense a public institution and that we have justly earned the description of a cooperative selling organization composed of producers of Mississippi Delta staple cotton operated under a policy of consistent service to the cotton trade.

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## The Romance and the Pioneer Spirit of Yazoo Delta Cotton Production.

Around the production and marketing of cotton in what is known as the Mississippi Delta there has always been a world of romance. Few people have understood that section of country in which this cotton is raised, and still fewer have ever appreciated the heroic, pioneer work which has made possible the development of that region and the growing of its staple cotton.

In this issue we are publishing an extremely interesting statement by Mr. L. N. Dantzler, Jr., regarding the work of the Staple Cotton Cooperative Association, which is now doing an annual business of $25,000,000 in handling cotton grown in the Mississippi Delta. In connection with that illuminating review of what has been achieved by that organization, whose success should stimulate a careful study of cooperative marketing by all other cotton growers in the country, a history of the development of the Yazoo-Mississippi Delta section was given in an interesting address by Mr. Alfred H. Stone, Vice President of the Staple Cotton Cooperative Association before the last annual meeting of the National Association of Cotton Manufacturers. In the course of this extremely important historical review of that region from early days to the present time, Mr. Stone said:

"This entire Delta area, of course including both sides of the present river, was once an estuary of the sea. During countless centuries it became filled, as the ocean receded, with detritus and silt washed into it from higher ground. In geologically recent times, when the Mississippi developed into the great central waterway of the continent, this region continued to build up, inch by inch, through deposits from the overflowing of the river. These things have their bearing on our story. The factors of soil, of rainfall, of atmospheric humidity, of physiography in general, plus the variety of seed used, are the factors which made Bender cotton known throughout the cotton world fifty to seventy-five years ago. They are the same factors which today determine the desirability of Delta Staples.

"A bale of cotton is at best a prosaic thing. There is nothing about it to arouse interest or to stir the imagination. But there is history back of this cotton of ours; a history of

human struggle, of which the outside world knows almost nothing. During a little less than one hundred years men have striven against unnumbered obstacles to wrest this land from nature, and to subdue it and to make it contribute to the needs of the world. And the task is not yet accomplished. Only half of the original swamp wilderness has been reduced to cultivation. Every step forward in the long, weary process of reclamation has been like a battle in an almost endless war. The drainage of thirty-one states flows through the lower Mississippi. Along our front more than three hundred miles of levees, some of it more than thirty feet in height, must be maintained to prevent the annual flooding of the land. Hundreds of miles of canals are required to care for interior drainage. The nature of the soil and the heavy rainfall combine to present problems of winter transportation which demand the expenditure of millions for roads. The ravages of plant pests and diseases have been destructive in the extreme. Yellow fever in bygone years exacted here its heaviest toll. Malaria has had to be reckoned with, probably to as great an extent as anywhere in North America. Close to three-quarters of a century passed before the solution of the pure water problem became an accomplished fact.

"The construction of the Panama Canal is probably the crowning glory of American engineering skill. Yet I question if that achievement, great as it was, demanded larger heroism and tenacity of purpose, the exercise of greater determination to triumph over nature in the face of almost insuperable obstacles, more patience and endurance, than has the conquest of the region of which we speak and in which our people work and live. And in the aggregate the outlay of funds has been almost as vast.

"Since the beginning of history we know that one of the chief goals of the adventurers and explorers of the world has been the discovery of some new and commanding article of commerce and trade. Wars have been waged, thrones and empires stolen and bartered, treaties negotiated and broken, to the end that this or that nation might dominate the source of supply of some great product of the earth, necessary to the life, comfort or progress of mankind. We witness a continuance of this struggle today, in the exploitation of every corner of the earth in an effort to find new fields for the production of cotton.

**"Another incentive has been present with our people. Apparently there has always been a personal fascination about the large scale production and handling of the world's great staples. The individual in a sense is thus given an international horizon. His fortunes become definitely bound up in the business and politics of the nations. His life touches the life of the world. No matter what his isolation, he has ceased to live alone. To the early settlers, chiefly from Virginia, the Carolinas, Kentucky, Georgia and Tennessee, and to their descendants and successors, the conquering of this wilderness has been a great adventure. It has required in high degree the possession of the pioneer qualities of courage and hope, of fortitude and perseverance and of the will to succeed. A timorous people would not have come here, or would not have stayed. A less virile people would have succumbed and disappeared. A people moved only by sordid desires would have lost its spirit in face of repeated disasters, and passed on to easier fields. This prospect has held out no hope to the weakling or the coward.**

"So much, briefly, for the physical aspects of the historical background which we are considering. But in any comprehensive appraisal of recently developed agencies for the handling and distribution of Delta staples we should also take account of antecedent economic conditions. In this regard the outstanding feature of the whole history of tropical and semi-tropical large scale agricultural enterprise is the part played by the factorage system. The English factor, through the seventeenth and eighteenth centuries, bore substantially the same relationship to overseas agriculture and trade that the great banking institutions bear to modern industrial enterprise, if we do not push the analogy too far. The ramifications of the factor's business were intricate and extensive. He would purchase for an English younger son a sugar plantation in the Barbadoes. (Any Englishman could engage in planting without loss of caste—which was not the case with 'trade.') He would arrange with the Royal African Company for a supply of slave labor. He would buy tools and machinery. He would furnish necessary funds and supplies. In return for this, in addition to interest, commissions, brokerage, and numerous incidental charges and tares, the entire crop was consigned to the factor. He sold at his discretion, and accounted for the proceeds. It is one of the curiosities of economic history that everybody seemed to prosper under the system, save only the sugar planter. He wore his life out under a mortgage, which was usually his sole legacy to his children. And the course of one was practically the course of all. He was finally freed by the same act of parliament which freed his slaves. The monetary compensation which was a feature of the act was paid, however, not to him, but to the factors of London and Liverpool, in partial liquidation of mortgage obligations.

"The operations of the system were essentially the same, regardless of crop or place. Developed in the West Indies, the system was transplanted to the mainland colonies, and applied to tobacco and indigo, and, after the Revolution, to rice and cotton. Before the end of the first quarter of the nineteenth century it had become inseparably identified with cotton production in the Southern states. Its predominant features remained the same. The factor invariably required the consignment of the entire crop, for the sale of which he charged a commission. The planter's basis of credit was usually fixed on baleage. On an advance of so many thousand dollars, so many bales of cotton were required to be shipped. A penalty commission was charged for every bale short of the contract number. There were various charges out of which the factor received a commission or rebate, such as storage, insurance, drayage, et cetera. Most factors averaged out their sales, in such fashion that their "average account" showed a more or less handsome profit. In the occasional instances in which the planter received a balance, this was left by him to his credit on his factor's books.

"The system had far reaching economic results. It established one of the most vicious circles possible to any industry. Its emphasizes being on baleage, there was every incentive to attempt the impossible in production. The more land a planter was willing to buy on time, the more cotton he could promise, the more money he could borrow, the more slaves he could purchase. It was a business of unusual hazards, for both the factor and the planter. Fortunes were made and lost in it. It was also a business of peculiar fascinations, and many men of large ability engaged in it. It was a business in which social prestige might be enhanced by success, but was not diminished by failure. But the planting end of it was fundamentally unsound, taken as a whole, and Southern students would probably agree that it could not have survived unchanged the vicissitudes of many more years, even had there been no civil war.

"Another result was the concentration in a few important cities and towns of practically all of the fluid wealth of the cotton growing South. The interior country, which was practically the sole source of this wealth, was in a state of hopeless economic dependence on these urban centers. Speaking for our own territory, the Mississippi Delta, I may say that this condition of dependence was not alleviated until the advent of the mortgage loan companies, about thirty years ago. Even then there was only a swapping of horses, an exchange of one mortgage for another. But that step had to be taken before even the semblance of a new order could be established. The Delta was tributary to New Orleans for sixty or seventy years. At a later date Mem-

phis played an important part in its business life. To a somewhat less extent this is still true. But from its first settlement, in the late twenties, down to the middle eighties, the Delta poured its wealth down the Mississippi and out into the world. Scarcely a pittance was kept at home. A region of large possibilities, it remained relatively impoverished; an area two-thirds that of Massachusetts, larger than Connecticut, nearly five times as large as Rhode Island, it was without banks, without railroads, with only a struggling village here and there, without roads, with poor schools and poor churches, with few of the comforts of life. Yet its staple product, Bender cotton, had made millions for others, and was known throughout the cotton world.

"The two-and-a-half decades after 1885 wrought very definite changes for the better, in all directions and along all lines. A pronounced aspect of this improved order of things was a change in the method of marketing cotton. And this was practically the first change in a hundred years, or since American cotton became a commercial crop. Down to this period the Delta planter had hauled his crop through miles of mud to a river landing, turned it over to a steamboat and bidden it goodbye. It was the child of his travail, but he saw it no more. Whatever grade and staple somebody else assigned to it were final. No matter how far the weight might vary from his, he could only make a belated protest. No matter how heavy the tare, he had to accept it. He was represented at the final obsequies only by proxy; with a slow boat and hundreds of miles of muddy water between himself and his proxy. I do not mean to suggest that there was much deliberate fraud practiced in these transactions. Custom had sanctioned trade usages which would not be tolerated today, for all of which the planter had to pay. In the main the factors were men whose honesty was absolutely beyond question. Nevertheless, it is almost an economic miracle that any business could survive even the accepted burdens which cotton production had to bear.

"Under the changed order, local factors still did a large volume of business, but under a somewhat modified system. Local buyers established themselves in every small town. Local banks were organized. Local compresses and warehouses were built. Railroads had made this possible. In short, the market had met the producer half way. The next step which followed this change was country buying. Under this it became possible for a planter to sell his crop at his own gin platform. I have referred to this as a change in the method of marketing. And strictly speaking it was not much more than this. The marketing system itself remained practically unaltered. The local factor could sell to the local buyer. Or the local buyer could deal direct with the grower. The grower might be present at every stage of these proceedings. And this change of situs, which made the transaction visible to the eye of the producer, was in its results probably the most important change between marketing in one place and marketing in another. A psychological change, however, accurred gradually in the producer. Closer contact with buyers, close connection with his crop after its production, unquestionably caused him to think more and more of the problems involved in converting his product into money, of the problems of marketing and of distribution. There was no longer the blind, unquestioning acceptance of a figure on an account of sale. The grower at least had an opportunity of knowing by name the man who bought his cotton, and of asking him why he could not pay more for it. He could even refuse to accept an offered price, although the only reason for his refusal was that he just felt that it was not enough. These things, elementary in themselves, were of tremendous significance for the future. A changed mental attitude toward a given habit or custom must precede a determination to alter the habit or custom itself.

"Having slowly come this far, it did not take the intelligent grower long to reach a conclusion as to his fundamental trouble. First and last it was that he was operating under a system which allowed him no voice whatever in adjusting the price of what he had to sell. He could not even counsel with someone as to what the price should be. The buyer, frequently a personal friend, could not help him. He could only show him a telegram, and commiserate with him over the price. The grower also saw that there was absolutely no relation between what it had cost him to produce his cotton, and the price he was offered for it. He knew that he was helpless to do more than temporarily refuse an offer. He realized that his financial necessities would soon force him to sell. The result of all this was the selling of the crop without any semblance of method or system. A planter would refuse an offer today, only to sell for less tomorrow. Wholly without concert of action, a score or a hundred growers might withdraw their cotton from the market on one day, and simultaneously throw it overboard on another. The duller the market, the greater their needs, the keener became their seeking for such outlet as might be discovered. They were constantly, and, in the very nature of the situation, inevitably engaged in disordered and unfair competition with each other. Disgusted with the small premium on staples, they would get rid of desirable strains of seed, and plant short cotton another year. Even under normal conditions there was a steady dumping of the crop in the early weeks of the season. Where planters were in position to make financial arrangements which enabled them to carry their crops, this was done without method and without definite objective. This course may be said to have been prompted by a feeling of instinctive rebellion against conditions which seemed unreasonable and ruinous, accompanied by a blind hope of improvement in time. There was no individual action possible whereby the improvement itself might be assured, or even facilitated. And in fact the holding venture as often as not resulted badly; sometimes disastrously for all parties concerned. But it should not be forgotten that there were times when holding was not a matter of choice, but was done because there was no possibility of sale.

"This description is not exaggerated. It is not even overemphasized. Such conditions could not possibly make for economic stability. It was either a feast or a famine. Cotton growing with us early became an intelligent occupation. Cotton marketing remained a haphazard game of chance. Genuine, conservative prosperity, except in comparatively few individual cases, does not exist among our people. The general aspect of the plantation property of the country demonstrates this; if a self-evident proposition needs demonstration. The period of inflation during and immediately following the recent war only aggravated the situation. Probably no other agricultural section in America, of equal potential wealth, was less prepared to stand the reaction which followed. I am quite sure that no other drank more deeply the dregs of depression.

"To avoid the possibility of being misunderstood, before leaving this branch of the subject I wish to add a few words with reference both to the factorage system and to its immediate successor, the localized buying system, if I may use this general designation. According to my interpretation of colonial and early southern economic history, the factorage system was an indispensable means to the end sought to be accomplished. Such of its features as appear to us to be indefensible, will present a different aspect when considered in the light of the conditions of which they were a necessary part and of the times in which they were developed. The system itself furnished the only possible economic instrument, then known to commerce whereby the English and other maritime and colonizing powers, following the period of direct governmental intervention and control, could carry on the development of their overseas possessions. It was the natural avenue for the application of private funds in the parent countries to private enterprise in the Colonies. I

have stated that the hazards of the business were very great. It was natural and inevitable that the economic burden of cost incident to such hazards could be correspondingly large. With only necessary changes of time and place these same observations apply with equal force to the factorage system throughout the period of its use in cotton production. And in many places cotton factors today still find a useful and an honorable function to discharge."

## Ford Motor Company Selects Norfolk Site—Reported to Build Large Assembling and Shipping Plant.

Norfolk, Va.—The Ford Motor Co. of Detroit which has been investigating sites in this city for the establishment of a large assembling and shipping plant, has selected a site in Newton Park and is working out details with reference to the transfer of the property. It is stated that work incident to the transaction is all that remains to complete the deal for the property which will cost $132,000.

No authoritative statement has been made relative to the size of the plant to be erected or the number of persons to be employed, but it is generally thought that the company will use Norfolk for more than an assembly point for its motor cars, the impression prevailing in some quarters that this plant will develop into a distribution center for Ford products throughout the South and that the bulk of the company's export business will be handled from Norfolk.

## Contract Let for $2,000,000 Paper Mill.

Monroe, La., June 30—[Special.]—The Brown Paper Co., Inc., of which H. L. Brown of Orange, Tex. is president, has awarded a contract to the Morton C. Tuttle Co. of Boston, Mass. for the construction of its proposed $2,000,000 fifty-ton Kraft paper mill which will be located within a mile and a half of Monroe.

The product of the plant will be made from yellow pine to be obtained from a tract of 27,000 acres of wood land, now in second growth, recently purchased by the company. The new mill will use natural gas to produce steam. George F. Hardy of New York is the engineer and construction work will begin at once.

## $4,000,000 FLORIDA HEALTH RESORT PROPOSED.

### C. W. Winkler of Miami Beach Promoting Enterprise—Six-Story Structure to Care for 1000 Guests.

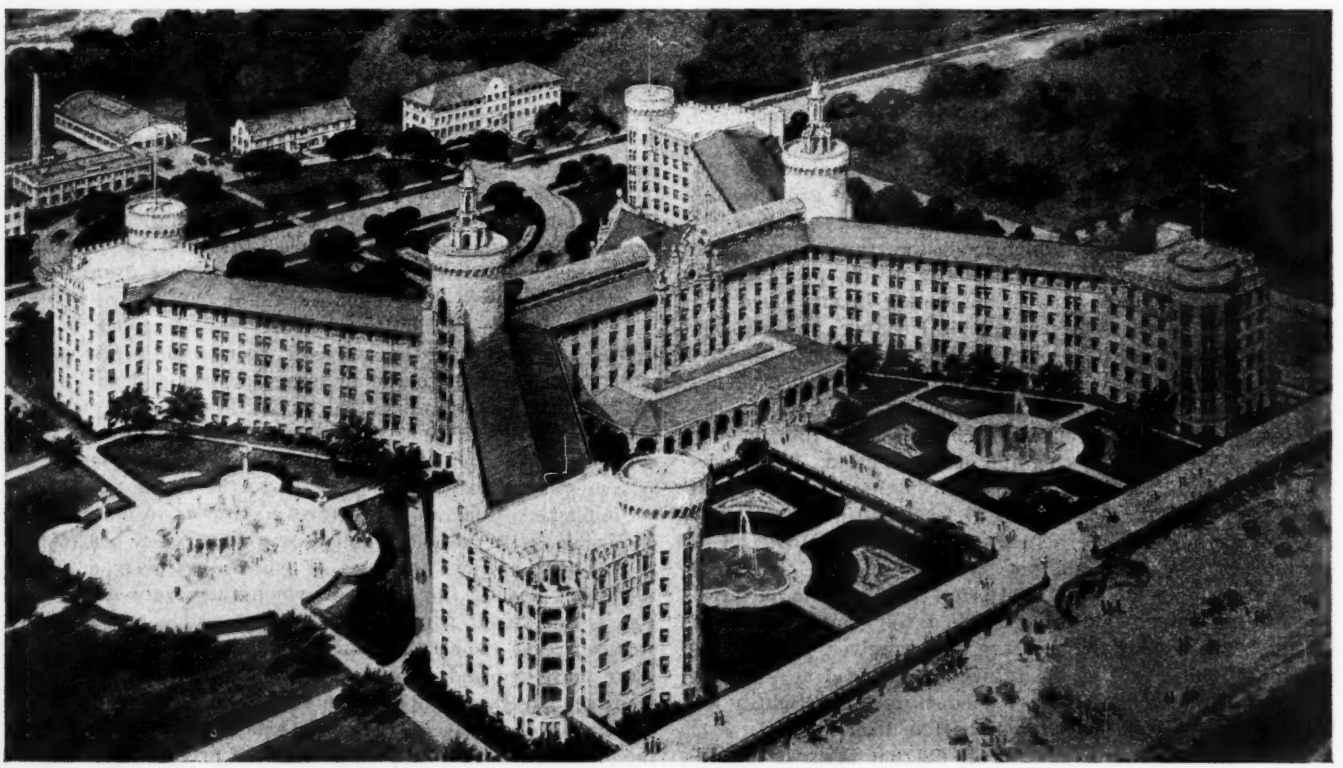
C. W. Winkler of Miami Beach, Fla., is promoting the establishment of a health resort to be known as the Riviera, at a point midway between Palm Beach and Miami Beach, and to cost in the aggregate nearly $4,000,000. It is planned to erect a six-story structure, which will be in the nature of a hotel-hospital-sanitarium and will have accommodations for 1000 guests.

The cost of the buildings and equipment is estimated as follows:

Main building, $2,550,000; mechanical and electrical plant, $100,000; furniture and equipment of rooms, $700,000; hospital equipment, $300,000; furnishings of lobby, palm room and lounge, $200,000; garden, terraces and landscaping, $40,000, and organ $25,000.

A site has been secured and plans for the buildings are being prepared by J. E. O. Pridmore, of Chicago. The main structure will have four massive wings, the distance from wing to wing being 558 feet. It will be of the Spanish type "with an infusion of Gothic ideals" and will contain 942 rooms and 1182 beds. In front of the building and on the ocean front there wil be a boardwalk 60 feet wide and 1000 feet long.

The structure will be fireproof with a reinforced concrete frame, floors and roof, hollow tile walls and floor finish of terrazzo, mastic and rubber. Vitreous tile floors will be used for toilets, baths, operating rooms, X-ray departments and kitchens. Stucco will be used for exterior finish with cast stone trimmings. The ground floor, second, third and fourth floors will be devoted to living accommodations for patients, while the fifth floor will be arranged for the segregation of the various medical departments. There will be gymnasiums for men and women and a lounge of sufficient size to seat 600. For out-door amusements, it is planned to construct a golf course and other facilities.



PROPOSED $4,000,000 HEALTH RESORT STRUCTURE AT MIAMI BEACH, FLA.

## The Unwisdom of the Present Cotton Contracts on the New York Exchange.

Mr. J. S. Wannamaker, President of the American Cotton Association, in a letter to the MANUFACTURERS RECORD in regard to cotton contracts on the New York Exchange writes:

"Contracts on the Exchange should give the same right to the buyer as to the seller. The contract as now existing is in favor of the seller; in other words, the seller has the option of tendering the cotton on any tender day for the month in which the contract is held from the 25th of the previous month until the 25th of the designated month, whereas the buyer has no choice, but is forced to stand and receive the cotton tendered on the last tender day.

"In case the seller fails to deliver cotton from the tenderable grades, the seller is penalized one-quarter of one per cent, or a total amount of $1.25 per bale above the price on the close of business on the last tender day. The buyer should have the right to call for the cotton he has purchased on the first tender day, or on any subsequent tender day, and the seller should be forced to deliver this cotton. Of course, as New York is a long way from the cotton belt the seller should be given a certain number of designated days wherein to deliver the cotton.

"The contract should carry the stipulation that either the buyer or the seller has a right to demand delivery, or to tender delivery of the cotton on any tender day. This right should not be given entirely to the seller and denied to the buyer, and the buyer under no condition should have the right to ring his contract out; that is, to pay a forfeit of one-fourth of one per cent, that is, if he stayed in until the last tender day. If the contract was changed so as to place the buyer on equal terms with the seller, as outlined above, it would take away from the manipulators the privilege they now enjoy of manipulating the market at their own sweet will and largely nullifying the law of supply and demand. We have seen manipulations during the last few months which have been flagrant and inexcusable. These manipulations affect all lines of the cotton industry.

"Depression in the raw cotton market drives from the market buyers of spot cotton and buyers of cotton goods. We need a stable market operated upon the law of supply and demand—not a market operated upon paper contracts which cannot be spun, and which should have no bearing whatever upon the law of supply and demand.

"The argument in support of the present contract is that it in no wise affects the price of cotton, 'that there is the same number of buyers as sellers that there is compelled to be a buyer for every seller.'

"There is nothing to this argument. On a declining market there are many people who try to sell and are unable to sell, and those who buy are constantly bidding below the market. In other words, the sellers are in control and they are constantly hammering the market down. The sellers realizing this, outnumber the buyers and the buyers are bidding below the market. Of course, the argument can be made that when the market is advancing, just the opposite condition will prevail—that the buyers will outnumber the sellers, and that the sellers will constantly be offering to sell above the quoted prices. If the contract was arranged so as to give the conditions mentioned above, according to the buyers the same rights as the sellers, this argument might hold good; otherwise, there is nothing to it.

"As the records will show, the amount of cotton sold on the New York Exchange each year is many times the amount of actual cotton produced, and the records will show that prices are frequently manipulated without rhyme or reason.

"If the contract were changed so as to give the buyer the same privilege as the seller, as outlined above, then it would be very beneficial to every legitimate line of the cotton industry. Of course, it would be bitterly opposed by the gambling fraternities.

"As to the matter of grades, this is a question in which there is a marked difference of opinion in the different sections of the cotton belt. The western section of the cotton belt produces a preponderance of low grade cotton, especially when they have adverse seasons for harvesting; therefore, they are bitterly opposed to limiting grades to be delivered in New York, taking the position it will result in depreciating the price of low grade cotton. There is some merit to this contention, although I feel satisfied it will not have anything like as serious effect upon grades as anticipated, and I am satisfied the matters I mention above are of far more importance than the matter of grades."

## NORTH CAROLINA COAL FIELD DEVELOPMENT.

### Important Operations Described by State Geologist Pratt.

Asheville, N. C., June 27—[Special.]—Development of a coal field with 67,000,000 tons of workable commercial coal, some of it equal in quality to the Pocahontas coal of West Virginia, is foreshadowed in a report, now in the printers' hands, on the Deep River Basin, in Chatham, Lee, Hoke and Moore counties, North Carolina. From early times there have been mining operations in these fields, and from the Egypt mines the Seaboard Air Line Railroad at one time secured coal for its engines. The mines were never worked by experienced coal operators, however, and following a mine disaster they were allowed to remain idle for many years.

Two years ago Dr. Joseph Hyde Pratt, director of the North Carolina Geological and Economic Survey, was asked to investigate the possibilities of oil in the Deep River Basin. While nothing indicating oil was encountered, Dr. Pratt became very much impressed with the coal in the district, and he asked the U. S. Geological Survey to take over the investigation, in co-operation with the state on a fifty-fifty basis as to costs.

On this basis the Government sent two of its best coal men, M. R. Campbell, an eminent coal expert, and K. K. Kimball as assistant, and after a year in the field their report has been completed. A bulletin giving the findings has been issued, and the report in printed form will come along in due time.

It is found that the Deep River Basin contains coal deposits estimated at 84,000,000 tons of which 67,000,000 can be mined. In addition there is territory adjacent, 60 per cent as large in area as the section reported on, which is considered as probably underlaid with coal. It would be left to private enterprise to make borings in this area, but the survey indicated that coal would likely be found.

Since the survey was begun there has been a considerable interest taken in the coal fields by outside interests. Alabama and Virginia coal operators have made extensive leases and are mining and shipping coal on a commercial basis, and additional leases are being taken by other operators.

Dr. Pratt, who is in attendance at the Southern Appalachian Power Conference in session here, sees the possibilities of an important industrial development in the demonstration that so large a coal field exists in North Carolina. Besides the mines and their dependents, which would mean an additional population of several thousand, he sees the possibilities of new industries. From laboratory tests it appears that the coal makes a very good quality of coke. By the establishment of by-products coking plants, coke for industrial and domestic purposes could be produced, and the gas piped for household and manufacturing purposes in adjacent cities and towns or utilized on the spot for generating electricity for transmission. Ammonium sulphate and other by-products could also be secured.

An independent investigation is being made by Dr. Pratt of the water power possibilities of the Deep River Basin. It is sought to determine whether there may not be established here a self-sustaining and coordinating power area. If conditions are found favorable, storage reservoirs could be built, power sites developed and transmission lines erected between existing plants, now maintaining separate power systems, and a central steam plant as a means of economically supplementing the water power when occasion required. Thus the entire development would add a further power supply for North Carolina industries. It is a significant fact that in North Carolina the demand for power is always very much ahead of the supply.

## Petroleum and Natural Gas Possibilities in Georgia.

The report entitled "Possibilities of Petroleum and Natural Gas Production in Georgia" recently issued by the State Geological Survey, opens an interesting phase of a possible new development.

The first part of the report is taken up with a discussion of geological principles necessary for the reader to know in order that the facts which follow may be understood. Conditions essential to the formation of petroleum in commercial quantities are given under the heading: Source, Conversion and Accumulation. Then follows a list of the popular fallacies relative to the occurrence of petroleum and natural gas, a history of oil prospecting in Georgia, and a description of features and the geology of the coastal plain of Georgia.

The report is concluded by two appendices, one giving some general considerations relative to the production of oil and gas including the proposed bill governing the construction of oil wells in Georgia, and the other a list of altitudes throughout the Coastal Plain.

The formations in Georgia, as now known, states the report, are not very promising for petroleum in commercial quantities. It is of course true that the formations may change lithologically in areas yet untested, and they may be more favorable as an oil source, though from the few fairly deep test wells this is not to be expected. Over all but the inland limits of the Coastal Plain of Georgia no formations older than the lower part of the Ripley have yet been penetrated, and it is therefore possible that the underlying Eutaw or older formations, if present, may be petroliferous. It is also even possible that beneath the Tertiary and Cretaceous in the southeastern part of the Coastal Plain of Georgia petroliferous Paleozoic strata may exist, but this is only a possibility. If such formations were present they would probably be too deep to be reached by the drill, and their value would lie in being a source from which migration of oil to higher horizons could take place.

In view of the fact that prospecting will probably be done in Georgia in the future, the writers feel that regionally the areas described offer relatively the most hope for drilling. The structural map shows that slight structural heights exist, and there is the possibility that these structures may increase in magnitude with depth. The most hopeful are as follows, in order of importance: (1) Along the slight structural arch shown in the Thomasville area; (2) along the apparent crest extending from Camilla through Valdosta and thence east, southeast through the area between Statenville and Thelma; (3) the area roughly embraced by a line drawn through the towns of Douglas, Broxton, Osierfield, and Ocilla; (4) along the gentle arching shown by a nose with axic approximately along a straight line extending from Claxton through Metter and passing about 12 miles east of Swainsboro.

A copy of this report can be secured from S. W. McCallie, State Geologist, on payment of postage, 10 cents.

## International Harvester Company Will Transfer Twine Mill from Auburn, N. Y. to New Orleans.

New Orleans, La.—The International Harvester Co., of Chicago, which recently secured a lease from the New Orleans Dock Board on a portion of Unit No. 1 of the army supply base here, will move its twine mills from Auburn, New York, to New Orleans. It is expected that the transfer will have been completed within the next few weeks. It is understood that the entire Auburn plant and many of the workers will be moved. Plans of the company here include also a storage and assembly plant for agricultural machinery for export to Latin America. William M. Gregg, superintendent of the Auburn mills, and John I. Devries, auditor, are among the officials who will come to New Orleans.

## $7,500,000 BANK AND TRUST COMPANY FOR BALTIMORE.

### Organization Reported Under Way by Local and Outside Capitalists.

Capitalized at $7,500,000, the American Bank & Trust Co. will soon be organized in Baltimore by local and outside interests, according to an announcement just made. C. F. Delmar & Co. and Holden A. Evans, both of Baltimore, are interested in the enterprise.

Of its capitalization, $5,000,000 will be apportioned to stock and $2,500,000 to surplus. The directorate will be composed of twenty-five men, the majority of whom, it is said, will be Baltimore capitalists. It is stated that the president of the institution will be an out-of-town man, while the chairman of the board will be of Baltimore.

The purpose of the bank is to serve the interests of Baltimore and the South.

## $800,000 Building for Endicott-Johnson Corporation—To Erect 10-Story Structure at St. Louis.

St. Louis, Mo., June 29—[Special.]—A building to cost about $800,000 will be erected here by the Endicott-Johnson Corporation of Endicott, N. Y., general contract having been awarded to the R. W. Morrison Construction Co. of St. Louis. The structure will be of reinforced concrete, 150 by 240 feet, 10 stories, with concrete foundations, flat slab floor construction and composition roof. Hollow fireproof and interior tile will be used, also metal doors, ventilators, ornamental terra cotta, rolling partitions and steel sash and trim.

Plans and specifications have been prepared by the owner and W. J. Knight & Co. of St. Louis are the engineers. Contracts for heating, electrical work, plumbing and elevators have not been awarded. Sub-contracts will probably be let within a week.

## New Secretary for Associated General Contractors.

Col. D. H. Sawyer, who has been appointed secretary of the Associated General Contractors of America, Inc., 1038 Munsey Building, Washington, D. C., to fill the vacancy caused by the recent resignation of Mr. Eugene Young to enter business at Minneapolis, is a native of Mt. Pulaski, Ill., and a graduate in engineering of the University of Illinois. After graduation he was engaged in engineering and building operations for about a year and thenceforward was successively City Engineer of Paris, Ill., chief engineer of the Illinois Traction Co., member of the firm of Sawyer Brothers with offices at Seattle and Spokane, and construction quartermaster in the army during the war, when he had charge of the building of Camp Grant. After his return to civil life he was connected with the James Stewart Co. on various building enterprises. Col. Sawyer therefore brings to his new position the valuable results of years of experience which has particularly fitted him for the office.

## American Companies Co-Operating in Deep Well Test.

Monterey, Mexico., June 15—[Special.]—Information from Linares, State of Nuevo Leon, is to the effect that the contract for drilling a 3000-foot wildcat oil well on the Popote hacienda near there has been let to Sheldon Burden for $50,000 by a group of oil companies which are to prospect the 150,000-acre property on an extensive scale. The companies which are co-operating in this deep test are the Transcontinental Oil Company, subsidiary of the Standard Oil Company of New Jersey; the Continental Mexican Petroleum Company, the Atlantic Gulf Oil Company, the Texas Company, the Mexican Petroleum Company and the Mexican Seaboard Oil Company.

## $4,000,000 Elevated Iron Ore Railroad for Tennessee Coal, Iron and Railroad Company.

[Telegram to Manufacturers Record.]
Birmingham, Ala., June 30.

Official announcement is made by the Tennessee Coal, Iron & Railroad Company that a standard gauge railroad, from its Red Mountain ore mines to Fairfield and Ensley will be constructed at once, the entire railway to be elevated, thereby eliminating grade crossings and all delays in quick transportation of ore. The development will cost around $4,000,000. Plans were drawn several years ago and at that time the cost was estimated at $7,000,000.

The length of the road will be about five miles, single track with such side tracks as will permit of the passage of trains. Steel construction throughout is proposed. All grade and railroad crossings will be eliminated and it is the purpose of the company to bring about an uninterrupted hauling of ore for use, both at Ensley and Bessemer.

At present the railroads take much time in hauling ore from the mines to the furnaces, although they are almost within sight of one another. Terminals of the elevated line will be provided with bins for quick distribution to points of use. All structural steel, rails, tie plates and other material will be worked-up in the Birmingham district. Construction of the road is to start immediately, rights-of-way having been purchased several years ago.

The construction of this road means the further development of the Tennessee Coal, Iron & Railroad Company's ore properties and ultimately the further development of consuming plants.

## Making Plans for New Construction Costing $600,000—Memphis Firm of Architects Has Many Buildings on Hand.

As indicative of the large amount of building construction in progress throughout the South, the work being handled by a firm of Memphis architects amounting to more than $600,000, is interesting. The firm of Raymond B. Spencer, architect, and Edwin B. Phillips, associate, report plans for the following: A $225,000 bank and office building at Dyersburg, Tenn., for the First Citizens National Bank, the building to be 50 by 80 feet, six stories high, with the first story of stone and the remainder of face brick; residence at Greenwood, Miss. for W. L. Craig to cost $50,000; Methodist church at Leland, Miss. to cost $35,000; Boulevard Baptist Church at Memphis to cost $75,000 and a residence at Memphis for Miss Alice Burnet to cost $30,000.

Plans are also being prepared for rebuilding a theater at Oxford, Miss. for R. X. Williams to cost $20,000; residence at Memphis for Edgar Webster to cost $15,000; Presbyterian Church at Helena, Ark. to cost $50,000; bungalow at Hernando, Miss. for Miss M. Jones to cost $10,000; residence at Memphis for M. Blackman to cost $10,000; Baptist Church at Senatobia, Miss. to cost $25,000; duplex apartment building at Memphis for Getay Bernstein to cost $20,000, and a similar building in the same city for T. J. Turley to cost $40,000.

Contracts for all of this work will soon be awarded.

## Contract Awarded for 10-Story Office Building in San Antonio.

San Antonio, Tex.—General contract has been awarded to the McKenzie Construction Co., of this city, for the erection of the proposed building at Travis and St. Mary's streets here for the Travis-St. Mary's Company, L. J. Hart, president. The building will cost about $231,000 and will contain five stores on the first floor and 178 offices above. It will be of reinforced concrete and brick. Phelps & Dewees, of San Antonio, are the architects.

## SOUTHERN ENTERPRISE IN ACTION.

### A Typical Instance of Business Initiative and Energy at Charlotte—Printing Company Buys Lot and Builds Warehouse for One Big Job.

Charlotte, N. C., June 30—[Special.]—The spirit of enterprise developed in the manufacturing South in late years is finely illustrated in a recent contract let in this city. The Observer Printing House, which, it might be stated, is an institution separate from The Observer Company, has just entered into contract with the Southern Railway Company for a job which calls for a display of Southern resources.

Some years ago this printing and manufacturing concern published a blue and white calendar for the Southern Railway Company that became a familiar object in business offices throughout the country. During the stress of the World War, the Southern discontinued publication of the calendar, thus arousing a considerable degree of fretfulness among the people who had become accustomed to it. So, better times having come along, the Southern decided to renew its annual Christmas presentation, but on a larger scale. The Southern evidently wants to see its calendar in every business office in the South, for it specified 100,000 copies as the order.

The manufacture of a calendar of the kind is a job that calls for equipment and floor space. The Charlotte house had the former, but what about the latter? Why, that was a small matter. The manager went out and bought a vacant lot three blocks away and gave the order for erection of a warehouse to be used for the express purpose of assembling the printed sheets and binding them into permanent form. After completion of the job, if it has no further use for the warehouse in sight, it will sell it off to some one of half a dozen expectant purchasers. The warehouse was planned after the firm had sent word to the Southern to come along with its job.

The capacity of Southern manufacturers to rise to an emergency and to capture contracts, as indicated in this instance, might be best appreciated through consideration of some of the items going into the contract. First off is two freight cars to haul the white paper. The completed job will call for ten cars in which to ship the calendars. The material required includes 2400 reams of book paper, weighing fifty tons; 100,000 wooden strips; 100,000 metal eyelets; six thousand pounds of blue ink; 100,000 wrappers and 500 wooden cases for shipping to agents over the entire Southern Railway System. Each calendar will be wrapped individually.

The paper used in this order, if placed sheet on sheet, would make a stack five hundred feet high, which equals the height of a fifty story building. If the sheets were laid end to end they would reach 720 miles. There will be 1,200,000 cylinder press impressions on the order, which means that the cylinders on the presses will travel 2275 miles. It will be necessary to handle the paper sixteen times to complete, the order being equivalent to 800 tons. The printing will be done in the plant with regular run of work, the assembling, stitching, wrapping and packing to be done, as indicated, in the warehouse erected specially for that purpose.

The MANUFACTURERS RECORD representative has thought this instance of Southern enterprise and capacity worth recording. It is typical of the developing resourcefulness of the captains actively engaged in promoting industry in this part of the country.

The Hunt County Commissioners, Greenville, Tex., have called an election for July 21 on $400,000 bonds to erect a courthouse.

## PURCHASES SEVEN PINES ORDNANCE DEPOT NEAR RICHMOND.

### Virginia Iron and Metal Company Will Locate Plant There—Other Manufacturing Plants May Follow.

The Virginia Iron & Metal Co. of Richmond, Va., has purchased the Seven Pines Ordnance depot, erected during the war at a cost of $2,000,000. In connection with the purchase of the property, the company wires the MANUFACTURERS RECORD:

"We have purchased from the United States Government the Seven Pines ordnance reserve depot located on good roads and on street car line six miles from Richmond. We have 1268 acres of land with 125 steel warehouses and several frame buildings running from 70 to 210 feet in length. This plant includes water, sewerage and light systems. We intend to locate manufacturing plants along with our plant on the property. This plant takes the Richmond freight rate, has 21 miles of private railroad trackage through it and will make a splendid storage and manufacturing center."

It is stated that property not available for manufacturing or commercial uses will be converted into five-acre farms and sold, and that houses will be supplied when needed.

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## Preliminary Work Begun on $1,250,000 Portland Cement Plant at Fort Worth.

Preliminary work on the $1,250,000 Portland cement plant to be constructed at Fort Worth, Tex. by the Southwestern Portland Cement Co. of El Paso and Los Angeles, is proceeding as rapidly as possible, as indicated by the following letter to the MANUFACTURERS RECORD from O. J. Binford, secretary and superintendent of the company:

"We have purchased ground to the extent of 671½ acres lying between the Houston & Texas Central Railway and the I. & G. N. Ry., within the switching limits of Fort Worth, for the purpose of erecting at the earliest possible time a 3000-barrel Portland cement plant. The construction will be entirely of reinforced concrete and the plant will be the most modern, dustless, wet process plant in the United States.

"The engineering will all be done by our own engineers in our Los Angeles and El Paso offices. A large part of the construction will be done by ourselves and the balance probably by Fort Worth contractors, at least contractors in that section of the State which we hope to supply from Fort Worth.

"Railroad connections have been made, trackage material has been ordered and a warehouse to use during the construction has been built and we are proceeding with all the preliminary work that it is possible to do while the plans are being completed."

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## Empire Gas and Fuel Company Files $150,000,000 Deed of Trust and Mortgage in Texas.

A dispatch from Lufkin, Tex., states that the Empire Gas & Fuel Co. recently filed a deed of trust and mortgage at Lufkin in favor of the Equitable Trust Company of New York and that the amount of money involved in the instruments is $150,000,000. In connection with the filing of the papers, it was stated that the company would enlarge its oil operations in Texas.

Replying to a request for information, H. R. Straight, of Bartlesville, Okla., vice president of the Empire Gas & Fuel Co., wires the MANUFACTURERS RECORD:

"Reports regarding our enlarging Texas operations evidently considerably exaggerated, as, owing to general conditions of oil business, we, for time being, contemplate only normal routine development and operations with no extraordinary construction work."

## Super-Phosphate Plant to Be Erected Near Tampa Will Cost $1,500,000.

Tampa, Fla.—Organization of the United States Chemical Corporation, reference to which was made in the MANUFACTURERS RECORD of June 14, has been effected with the following officers: Lorenzo Wilson, of Jacksonville, president; Harry L. Pierce, of New York, vice president; Mangum Webb, Charlotte, secretary-treasurer, and P. S. Gilchrist, also of Charlotte, chairman of the board of directors. The company is capitalized at $2,350,000 and plans to build a $1,500,000 super-phosphate plant near Tampa and develop 4000 acres of phosphate lands at Dover, Sidney, and in the vicinity of Plant City.

Plans for the new plant are being drawn by the Chemical Construction Co., of Charlotte, of which Mr. Gilchrist is president. It is expected that construction will begin within 60 days.

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## Well in Logan Field Producing 1,000,000 Feet Gas and 50 Barrels Oil Daily.

Logan, W. Va.—Indicating future large developments of gas and oil properties in the Logan district, the Wocatocke Oil Company, of which Willard Comstock, of Charleston, is president, and which is developing a 42,000-acre lease northeast of Ethel, has struck a well producing 1,000,000 feet of gas every twenty-four hours and 50 barrels of oil in the same period.

The well is the sixth that has been brought in on the lease and the company plans for the development of many others. It was drilled under the supervision of John Gilmour.

Oil and gas developments in other parts of Logan county include that of the Ohio Fuel Co., on Snap Creek; South Penn Co., on Hewett's Creek, and the Columbia Carbon Co., at Peck's Mill.

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## Lone Star Gas Company to Erect Office Building.

Dallas, Tex.—An office building to cost about $175,000 will be erected here by the Lone Star Gas Company to be used almost exclusively by the company. The building will occupy a site of 83 feet on Harwood street and 90 feet on Wood street. It will be four stories high, of reinforced concrete and brick, with foundations sufficiently heavy to carry twelve stories, the intention being to erect additional stories as required. Lang & Witchell, of Dallas, are the architects.

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## Big Construction Program of Carbon Plants in Louisiana—Expected to Cost $10,000,000.

Monroe, La.—According to estimates of the Department of Conservation of Monroe, about $10,000,000 will be expended during the year for the construction of carbon plants in Ouachita and Morehouse parishes. About half of the construction work has already been accomplished and it is expected that fifteen or twenty plants will have been erected by the end of the year.

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## Sarasota to Have $300,000 Hotel and Casino.

Sarasota, Fla., June 30—[Special.]—Plans for a hotel and casino to be erected here by Andrew McAnsh of Chicago at a cost of $300,000, are being prepared by William G. Krieg, architect, also of Chicago and it is expected that construction will begin within a week or ten days. The structure will be of brick, concrete and hollow tile, part fireproof and part slow-burning construction. The W. R. Carman Construction Co., of Tampa will probably be the contractor.

# THE IRON AND STEEL SITUATION

## No Unfavorable Developments in Steel Industry—Production for Last Six Months Exceeds Any Similar Period.

Pittsburgh, July 2.—[Special.]—The official statistics of steel production in 1922, just issued, show a total of 34,568,418 gross tons of ingots made. The rate of production was known approximately during the year, from the monthly returns of 30 of the producers. The year's production was 81 per cent above that of 1921, 15 per cent under that of 1920, 21 per cent under that of the record year, 1917, and 15 per cent above that in the two biggest tonnage years before the war, 1912 and 1913.

Production in the half year just ended was at a rate 36 per cent above the rate in 1922 and was by far the greatest production in any consecutive six months in the history of the steel industry.

Production of steel castings in 1922 was 1,034,508 tons, making a total of ingots and castings of 35,602,926 tons. It is this that is commonly spoken of as "the production of steel," but this is theoretical or tehnical rather than practical. While castings are sold commercially, ingots merely represent a stage in the manufacturing processes. In converting ingots into mill products some scale is produced, which goes to the blast furnace for reworking, and a great deal of scrap, which is charged to open-hearth furnaces along with pig iron and comes out as "steel" to go over the ingot scales a second time.

The actual steel of commerce is more nearly indicated by the production of rolled steel, which was 25,546,907 tons in 1922, together with 905,097 tons of rolled iron, making 26,452,004 tons of rolled material.

The rolled steel was 74 per cent of the weight of ingots produced, while the normal is about 76 per cent, the difference being represented in scale and scrap losses. Even the rolled steel thus reported is not all commercial product, as most of the rods are drawn into wire and the skelp welded into pipe, involving additional losses. As a general rule it may be taken that the products the steel mills sell weigh between 70 and 75 per cent as much as the ingots commonly reported as their "production."

The finished steel markets have been relatively quiet in the past week, conditions being quite representative of the usual midsummer dullness. In references to the state of the steel market the actual situation is usually overdrawn, being described as extremely active if the sales run a little ahead of the shipments and stagnant if they run a little short of the shipments. The actual turnover in the past fortnight has probably been considerably more than 50 per cent of the shipments, representing more steel than the whole industry could have made 15 years ago. The orders are going largely to the mills with the leaner order books and able to make the earliest deliveries. The mills sold far ahead do not need additional business, and thus the market is moving along smoothly.

Prices of finished steel products are firm all along the line, these prices having ruled for more than two months, or since advances ceased late in April.

So far as concrete developments to date are an indication, the steel industry should do as well in the second half of the year as it has done in the first half. If buyers are overstocked with material they have not disclosed the fact, and with the very conservative feeling that has existed in all business circles in the past two months the reasonable assumption is that buyers would be canceling orders or instructing mills to postpone shipments if they were overstocked. Actual consumption of steel is substantially as heavy as at any time and is heavier than in the early months of the year. The customers of the steel industry are running well, with business ahead of them. If steel conditions are to be unfavorable in future the developments in that direction are yet to occur. In fact, the fundamental industrial conditions seem so much sounder than the prevailing "sentiment" that the prospect is there will be a favorable reaction in sentiment, leading in August or September to more active buying of steel, and in some quarters predictions are made confidently that such a buying movement will occur. This prospect can be changed only by new developments, and there are no physical causes now apparent to disturb it.

Connellsville furnace coke for third quarter is offered down to $5.00, against $5.25 or $3.50 quoted a week ago, without inducing the uncovered furnaces to contract, and these furnaces will probably buy from hand to mouth. Many did contract some time ago, at prices ranging generally from $6.00 down to $5.50.

Bessemer pig iron has declined $1 to $27.50, valley, on small sales, while foundry is down 50 cents to $26.50, valley. Nominally merchant furnaces quote basic iron at $27, valley, but make no secret of the fact that they would like to have inquiries so that they could figure more closely, and some observers even think that less than $26 could be done. Pig iron consumers are showing a remarkable unwillingness to commit themselves.

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## Continued Firmness in Pig Iron Market.

Birmingham, Ala., July 2—[Special.]—Pig iron manufacturers in Alabama are holding firmly to the $27 per ton price for their product, No. 2 foundry. One small furnace interest, a one-furnace company, which melts iron itself to a considerable extent, a couple of weeks ago offered several thousand tons of pig iron at $25 per ton, following a like action by the furnace company at Lafollete, Tenn. The larger and more active furnace companies of the district did not become panicky by reason of this flurry and continued holding their product at $27 and their operations, despite the slow buying, are still based on the $27 rate.

Production has not been disturbed in the least, the surplus iron continues below 20,000 tons and the melt in this territory and elsewhere apparently is at maximum yet. The furnace interests of the district are sitting firmly in the boat and waiting, confident there will be buying. On the other hand, consumers feel that there should be some reduction in the price and knowing that the price will not be any higher later on are holding off in their buying until the actual need is at hand and then will purchase such tonnage as will tide them over. There is little buying going on now. The furnaces in operation will lose no time this week because of the holiday but mining operations and others will lag for a couple of days to give the labor a little rest. The railroads are giving every service that could be asked for and as a consequence there is no iron accumulating.

Iron-using plants of the district, including the soil and pressure pipe manufacturing industries are melting almost to capacity. The pressure pipe plants have been getting in a few lettings from week to week and the prospects are a little brighter than two weeks ago when it was announced that business on hand gave probable activity for four or five months. The United States Cast Iron Pipe and Foundry Company are finding fairly good sale for the DeLavaud method made cast iron pipe while the American and National cast iron pipe companies are both producing and shipping steadily. Announcement that water freight rates to the California coast points will be advanced August 1 will bring about protests. The low rates at present have brought about considerable business in iron and steel products, cast iron pipe in particular.

The export business through the port of Mobile continues

heavy. Sailings during the past 10 days have carried a considerable amount of steel rail and other shapes, wire and nails, Japan and Manchurian railways taking no small tonnage of rail from this district.

Additional domestic steel rail business is announced. The Tennessee Coal, Iron & Railroad Company has received a share of the 60,000 tons order which the Illinois Central and Central of Georgia Railroad will take, the amount of this total to be used by the Central to be produced in Birmingham and a portion of that taken by the Illinois Central also to be rolled here. The Southern Pacific, Southern and Louisville & Nashville have placed additional orders for rails with the Tennessee Company for delivery during the last half of the year while the export business is not near completed.

Consolidation of the three large independent coal companies of the Birmingham district, DeBardeleben Coal Company, the Corona Coal Company and the Empire Coal Company into the DeBardeleben Coal Corporation, the deal to be concluded today, July 2, in Philadelphia, capitalization to be $10,000,000, establishes the largest independent coal producing company in the state, that honor having been maintained for years by the Pratt Consolidated Coal Company. First mortgage 6½ per cent serial gold bonds have been offered to the public to the amount of $4,500,000, Drexel & Co., Graham, Parsons & Co., Cassatt & Co., and Hibernia Securities Co., Inc., Philadelphia. are underwriting the bonds. Henry T. DeBardeleben, who is president of the new corporation is a coal man of considerable experience, his father being one of the pioneer developers of this district. The Corona Coal Company has been operated for years by Morris and Edgar Adler, while the Empire Coal Company has been operated with Walter Moore, one of the prominent and ardent coal operators of the district for years.

The new corporation will have more than 100,000 acres of coal lands, a large proportion of it being undeveloped coal lands. It is understood that efforts will be given to a development of the export and shipping business at New Orleans, Mobile and Pensacola. The DeBardeleben Company has a subsidiary at New Orleans with facilities for handling coal by tugs, barges and other facilities. Walter Moore will not leave the coal industry entirely, for several of his smaller projects, the Pratt Fuel Company, the Dora Fuel Company and the Kershaw Mining Company, at Dora, and several other small operations in the western part of Walker county will keep him in the coal business, his big interests, the Empire Coal Company passing.

Negotiations are under way for the purchase of the Pratt Consolidated Coal Company, but nothing definite is in sight, these negotiations having been on for many months.

The Alabama Company, one of the active smaller iron companies of the Birmingham district, of which E. N. Rich, Baltimore is president and J. W. Porter, Birmingham, vice-president and general manager, has declared a dividend on its $600,000 first preferred 7 per cent stock, covering interest due for the past two years, which was omitted. The total amount to be distributed among these stockholders will be $94,500. The Alabama Company is operating two blast furnaces at Gadsden, with ore mines nearby, coal mines in the Birmingham district, coal mines and coke ovens in Tuscaloosa county, besides other properties. The company has sold its probable make into October and is assured of its portion of the business that will be placed for the balance of the year. Mr. Porter is considered one of the best posted and conservative iron men of the district and has studied the prospective market so long that he is considered an adept in that regard. The Alabama Company produces cast-in-mold pig iron and finds output for its products in various sections of the country. The declaration of dividend indicates a most healthy condition of the corporation.

The coke market is strong and production is being maintained. The quotations are around $8 and $9 per ton, for foundry coke while $9.50 is occasionally done on a car or two at a time.

The scrap iron and steel market is very quiet, with little new business being done. The activity is considerable on business that was booked months ago. The dealers are buying in the same quantity they are shipping.

The United States Cast Iron Pipe and Foundry Company is pushing the work on the additional machines for the manufacture of DeLavaud cast iron pressure pipe and are finding a good market for the product being turned out. The National Cast Iron Pipe Company is putting in four of the machines and by August 15 will be operating them. The company is producing around 200 tons of pipe under the old method daily.

PIG IRON.

No. 2 foundry, 1.75 to 2.25 per cent silicon, f. o. b. furnaces, $25.00 to $27.00; No. 1 foundry, 2.25 to 2.75 per cent silicon, $25.50 to $27.50; iron of 2.75 to 3.25 per cent silicon, $26.00 to $28.00; iron of 3.25 to 3.75 per cent silicon, $266.50 to $28.50; iron of 3.75 to 4.25 per cent silicon, $27.00 to $29.00; charcoal iron f. o. b. furnaces, 34.00.

OLD MATERIAL.

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|---|---|---|---|
| Old steel axles | $22.00 | to | $23.00 |
| Old iron axles | 25.00 | to | 26.00 |
| Old steel rails | 17.50 | to | 18.00 |
| Heavy melting steel | 15.00 | to | 15.50 |
| No. 1 R. RR. wrought | 15.00 | to | 15.50 |
| No. 1 cast | 20.00 | to | 20.50 |
| Stove plate | 15.00 | to | 16.00 |
| Old car wheels | 18.50 | to | 19.00 |
| Old tramcar wheels | 19.50 | to | 21.00 |
| Machine shop turnings | 8.00 | to | 10.00 |
| Cast iron borings | 10.00 | to | 11.00 |
| Cast iron borings, (Chem.) | 16.00 | to | 17.00 |

## Alabama Power Soon to Place In Operation Third Power Unit at Mitchell Dam.

Birmingham, Ala., July 2—[Special.]—The Alabama Power Company will within the next 15 to 30 days have the third unit or wheel in operation at the big hydro-electric plant at Mitchell Dam, on the Coosa river, with the place ready for the fourth wheel to be put in later. When this plant is completed, there will be 120,000 horse power to be added to the power of the corporation. The Mitchell Dam plant is one of the most modern in the country today, a new method of construction having been employed, the power plant being in the center of the stream instead of on the side of the river and the construction under the O. G. Thurley patent so that the on-rushing water is held back by the flow over the spillways, and the most power is gotten from that stream which strikes the wheels.

Mr. Thurlow is chief engineer of the Alabama Power Company and he worked out the project after the installation of the dam at lock 12 on the Coosa. The first two units have proven everything that is claimed of the new method and from all parts of the country, especially where hydro-electric plants are under consideration, attention is being attracted.

The Mitchell Dam project was started on in July, 1921 and the completion is to be announced August 1, 1923. The cost of the plant is estimated around $8,000,000. J. U. Benziger will be in charge of operations of both Lock 12 and Mitchell Dam plants.

The Alabama Power Company the past week had as guests at Mitchell Dam members of the Rotary Club and other guests of Birmingham and several high officials of the Louisville & Nashville Railroad Company, including W. L. Mapother, president. The big project was shown in its entirety, with figures as to dimensions, power results, etc.

The Alabama Power Company is already at work on the preliminaries to the construction of a still larger hydro-electric power plant on the Tallapoosa river at Cherokee Bluffs, in East Alabama, this work to take two and half years and longer to complete. It will be in a locality that will provide power for a large number of cotton mills and other industries which are being invited to the state and which are considering that section of the state.

# RAILROADS

## RAILROAD FUEL PREFERENCE ABOLISHED.

### Cars Whether Private or Railroad Owned Must Be Distributed Pro-Rata to All Bituminous Coal Mines.

On June 26 the Interstate Commerce Commission issued an order directing the railroads to stop on or before September 1 the practice of distributing to bituminous coal mines any private cars or cars to be loaded with railroad fuel in excess of the pro rata distribution of cars for coal loading currently made to any other bituminous coal mines which do not receive private cars or cars to be loaded with railroad fuel, and which are on the same division or district established by a railroad for distribution of cars. Furthermore, the railroads are required to establish on or before the same date and thereafter to continue a practice whereby all cars distributed to such mines shall be distributed on a pro rata basis, so that every mine on the same division or district shall receive the same pro rata share of the total number of available cars.

The order, which seems to be in line with contentions made by either the operators of commercial soft coal mines, the associations of producers of soft coal, and by the United Mine Workers, was opposed by four of the eleven members of the Interstate Commerce Commission viz. Mark W. Potter, Winthrop M. Daniels, Henry C. Hall and Frederick L. Cox, who strongly objected to it, Mr. Potter expressing the opinion that the Commission is without power to say that a private car cannot be used at all except as part of a railroad's own equipment. Moreover, he said that there is public need to have railway fuel of high quality at the lowest cost and that assigned and private cars make for efficient and economical transportation. Other objectors to the order contended that the practice of the railroads in question was not unreasonable and that the practice which is condemned was prescribed by the Interstate Commerce Commission fifteen years ago. Moreover, the order prescribing it said Mr. Hall, had been upheld by the Supreme Court of the United States, it being recognized by the Commission that a railroad had the right to secure its fuel from either its own mines or from mines whose entire output it bought, and if its fuel contracts covered fuel which it reasonably needed for current operation it could use its equipment to get it even though operators of commercial coal mines are deprived during periods of car shortage of some cars which they would have had on a strict pro rata distribution.

"The majority," added Commissioner Hall, "take away this right and brush aside the public necessity. They substitute nothing which will protect the public servant or the public served. In effect, although not intent, their findings subordinate the needs and interest of all others to those of the coal industry."

The effect of the order will be felt by all railroads and by many of the big industries of the country.

## Freight Traffic Still Very Heavy.

Loadings of revenue freight on the railroads during the week ended June 16 totaled 1,007,253 cars, this being the third time within a month that more than a million cars were loaded in a week and the number of surplus freight cars in good repair continues to increase. The loadings showed an increase of more than 158,000 cars as compared with the corresponding week of last year and of more than 231,000 cars as compared with the same week in 1921. Records of preceding years for this season were also broken.

## Florida East Coast Spending Over $2,100,000.

In the annual report of the Florida East Coast Railway Co. for 1922 President W. H. Beardsley says that the shop crafts' strike last summer resulted in slightly increasing maintenance of equipment expense yet it is gratifying to note that the company was able to keep this expense normal and there was no interruption to operation on account of this labor trouble. A large reduction of transportation expenses was due to advantageous fuel contracts and to economies accomplished in train, station and yard service.

During the year there were 57¾ miles of main line track relaid with 90 pound rails which took the place of 70 pound rails. There was authorized for this year's purchase heavy rails for an additional 75 miles of main line at a cost of about $630,000 and the relaying of branch line with 70 pound rails at a cost of about $160,000 was also approved and about half the work has been finished. The rest should be completed this year. There will also be spent $100,000 on passing tracks and about $250,000 for renewing ballast. These and other expenditures for buildings, etc. will make a total of $1,575,000 authorized for various improvements without considering equipment expenditures of $600,000.

The income account shows railway operating revenues for 1922 $13,427,624; railway operating expenses, $9,431,824; railway operating income, $3,220,341, the latter being an increase of $1,664,967 as compared with 1921 or slightly over 107 per cent. It is particularly interesting to note that there was a reduction of $1,786,809 in operating expenses.

## Baltimore & Ohio Statement Shows Gains.

The statement of earnings and expenses of the Baltimore & Ohio Railroad Co. for May shows that railway operating revenues in that month were $23,609,843, an increase of $6,748,091 as compared with May of last year; railway operating expenses, $18,023,885; increase, $4,878,991; net revenue from railway operations, $5,585,958; increase, $1,869,100; net railway operating income, $4,297,175; increase, $1,792,688.

Accumulation for the first five months of the current year: Railway operating revenues, $107,281,844; increase, $26,183,200; railway operating expenses, $82,235,416; increase, $18,313,399; net revenue from railway operations, $25,046,428; increase, $7,869,801; net railway operating income $18,821,318; increase, $6,907,355.

A statement for the first six months of this year—June being estimated—shows railway operating revenues, $129,981,844; increase as compared with the same period of last year, $31,302,685; net railway operating income, $22,821,318; increase, $8,241,023.

## New Equipment and Rail Orders.

Virginian Railway has ordered 25 more gondola cars of 120 tons capacity from the Pressed Steel Car Co., this making a total of 1025 of these large cars ordered by the road this year.

Gulf, Mobile & Northern Railroad has ordered 5 Decapod type locomotives from the Baldwin Locomotive Works.

Equipment inquiries reported in the market include 50 box cars and 50 flat cars of 40 tons capacity and 50 gondola cars and 50 steel hopper cars of 50 tons capacity for the Muscle Shoals, Birmingham & Pensacola Railway, besides 175 drop bottom gondola cars of 70 tons capacity and 75 hopper cars of 55 tons capacity for the Nashville, Chattanooga and St. Louis Railway.

Southern Pacific Company has ordered 14,000 tons of rails from the Tennessee Coal, Iron & Railroad Co. and the Illinois Central Railroad is reported in the market for 60,000 tons and the Norfolk & Western Railway for 50,000 tons, part of the latter of 130 pounds section and part 100 pounds.

### Coal Branches Change Ownership.

Three detached lines of the Baltimore & Ohio Railroad in Kentucky have been disposed of for a total of about $8,000,000, it is announced, the deals being subject to approval by the Interstate Commerce Commission. These lines are all coal roads and have a total of nearly 60 miles of track. They were built for developing coal mines several years ago, the first being the Sandy Valley & Elkhorn Railway, 30 miles long from Shelby to Jenkins and Dunham, Ky., to reach properties of the Consolidation Coal Co. and the Millers Creek Railroad 3¾ miles long to reach mines of the same company, which now acquires them for about $6,000,000. The other road is the Long Fork Railway, running from Weeksbury to Martin, Ky., 25 miles, carrying the output of the Elkhorn-Piney Coal Mining Co., and which was purchased for about $2,000,000 by the Chesapeake & Ohio Railway, with which system all of these three roads are connected.

The interest of the Baltimore & Ohio Railroad laid in the coal traffic from the mines on these lines which was hauled out over the Chesapeake & Ohio Railway to the Baltimore & Ohio lines and then carried over them to final destinations. The Baltimore & Ohio Railroad operated the three roads, supplying equipment for them and their sale will now, it is stated, enable that company to utilize the capital invested in them to greater advantage while the coal mine owners and the Chesapeake & Ohio Railroad will gain by having the lines under their direct ownership and control.

### Pennsylvania Railroad Revenues Over $2,000,000 a Day.

The enormous amount of railroad traffic which is being handled this year is emphasized not only by car loading records being broken with regularity but by other facts, for instance the statement of the Pennsylvania Railroad for May which shows that the railway operating revenues during that month were at a rate of more than $2,100,000 per day for the 31 days, the total being $65,465,627, an increase of more than $14,400,000 as compared with May of last year, freight traffic revenues alone being over $47,400,000 an increase of over $12,700,000 in comparison with May a year ago. The fact that the net railway operating income is reported for the month at $8,615,341, an increase of $1,244,216, reflects the large operating expenses, transportation cost being over $24,000,000, maintenance of way, etc., over $8,600,000 and maintenance of equipment over $16,600,000. For the first five months of this year railway operating revenues were $241,001,038, an increase of $43,753,232 as compared with the same period of last year, while net railway operating income was $33,547,480, a decrease of $2,545,169.

### Extension Projected.

It is reported from Washington that the Interstate Commerce Commission has authorized the construction of the Fort Myers Southern Railroad which will be practically an extension of the Atlantic Coast Line from Fort Myers to Marco, Fla., about 45 mi. This extension, which would develop promising agricultural territory, has been in contemplation for several years.

### Increase in Tomato Pack This Year in Missouri and Arkansas Ozarks.

Springfield, Mo.—More tomato canning factories will be operated in Missouri and the Arkansas Ozarks this year than in previous years. It is estimated that the tomato crop in this region will total 40,000 acres and be worth $3,000,000. All the regular canners are expected to operate their plants and many new ones will pack. The canning season, which is about two weeks late because of the cool spring, will begin between August 1 and 10.

# TEXTILE

### Contract Awarded for Southern Worsted Company's $1,000,000 Plant—Contract Also for 80 Dwellings.

Greenville, S. C., June 29—[Special.]—Contract for the concrete, brick and carpentry work on the proposed $1,000,000 plant here for the Southern Worsted Co. has been awarded through the Charlotte office of Lockwood, Greene & Co., engineers of Boston and Atlanta, to the Gaston Construction Co. of Gastonia, N. C. Other contracts will soon be placed.

The main building will be 180 by 600 feet, one story, of brick and timber construction, and will be equipped for spinning, weaving, dyeing and finishing worsted fabrics for men's wear. It will contain about 110,000 square feet of floor space and will cost $250,000. The installation will consist of approximately 6000 spindles and 120 looms, the machinery to be electrically driven. A side track has been installed and grading is in progress. Robert J. H. Worcester is the engineer in charge of the work.

It is stated that a contract has been awarded to the Minter Homes Co. of Greenville for the erection of 80 dwellings.

### Hemp May Get $300,000 Cotton Mill—Promoters Considering 10,000-Spindle Plant.

The establishment of a $300,000 cotton mill at Hemp, N. C., to operate 10,000 spindles, is under consideration by promoters among whom is Capt. W. W. Cowgill, of Pinehurst. Capt. Cowgill, it is said, is acting with associates, many of them residents of Hemp, who have subscribed about $50,000 for the enterprise. The proposed site for the mill is surrounded by good farming territory, where labor is considered plentiful, and is in close proximity to the lines of the Sandhill Power Co. and the coal supply of the Carolina Coal Co. It is stated that a site of 20 acres has been secured for the mill, but no date for beginning construction has been set.

Capt. Cowgill wires the MANUFACTURERS RECORD: "Plans not yet complete."

### Philadelphians to Establish Plant at Greenville.

The Steel Heddle Manufacturing Co., of Philadelphia, will establish a plant at Greenville, S. C., as referred to by the MANUFACTURERS RECORD last week. In connection with its plans, the company writes:

"Contract has been given to J. E. Sirrine & Co., Greenville, for a two-story concrete building, 125 by 60 feet, at a cost of approximately $50,000, including the land. The plant will be used for the manufacture of pitch band loom reeds and also possibly for assembling purposes of loom harness, which are now manufactured at our plant in Philadelphia. We have purchased the plant from F. & B. Suter, at High Point, N. C., which will be transferred to Greenville upon completion of the building and will be run under the management of our Southern representative, Mr. Hampton Smith."

### Drayton Mill to Make Tissue Ginghams.

Spartanburg, S. C.—Plans are being made for beginning the production of tissue ginghams at the Drayton Mill plant here. It is said several grades will be produced, but that little change in the mill's equipment is contemplated. Yarns from which the ginghams are to be made has already been secured, and are now being dyed in Northern plants. They will soon be shipped here for conversion into the finished product.

The Drayton Mill at present is equipped with 44,800 ring spindles and 842 broad looms for the manufacture of lawns.

## Massachusetts Company to Establish Worsted Yarn Mill at Norfolk.

Jealous & Fitch, Inc. of Boston has leased a building at Norfolk for the establishment of a mill for the production of worsted yarns. The Norfolk-Portsmouth Chamber of Commerce, interested in locating the enterprise, wires the MANUFACTURERS RECORD:

"Jealous & Fitch, Inc. of Boston have leased the Margolius Building at Granby and 22nd streets for the Virginia Worsted Co., a Massachusetts corporation controlled by them, which will begin the manufacture of worsted yarns in the early fall. This building contains about 15,000 square feet and is now being renovated for the concern. Machinery will be installed in the next two months. The plant will employ from 60 to 75 people at the outset. Both principals of the new company were formerly connected with the American Woolen Co. They have signed a five-year lease with privilege of renewal. Later they may build if the proposition develops to anticipated proportions."

## Model Mill Under New Management—Improvements Planned.

Spartanburg, S. C.—A change will be made in the management of the Model Mill, an enterprise connected with the Textile Industrial Institute here, of which Rev. D. E. Camak is president. The operation of the plant will be in charge of E. E. Child of Whitmire, S. C., associated with Dr. H. K. Boyd, and it is expected that additional machinery will be installed for materially increasing its capacity.

The mill will hereafter be operated independently of the Textile Industrial Institute, but students of the Institute will form the bulk of the help. The erection of a new weave shed is being considered.

## Purchase Interest in Champion Knitting Mills.—To Double Capacity.

Chattanooga, Tenn.—The interests of E. H. Grocer and J. C. Champion in the Champion Knitting Mills here have been acquired by Clyde Wilkins, who will become president and general manager of the company. Walter C. Champion, it is stated, retains his interest in the mills and will remain with the company.

Plans are being made for the installation of new machinery which will double the present output of the mills, producing about 400 dozen pairs of hose per day. The company will manufacture silk hosiery exclusively.

## Derry Damask Mills Organize.

Gaffney, S. C.—The Derry Damask Mills have organized with an authorized capital stock of $100,000 and have taken over the Palmetto Damask Mills here from H. D. Wheat and C. H. Wheat, a reference to this purchase having been made in the MANUFACTURERS RECORD of June 14.

Officers of the new company include J. R. Mallory, Landrum, S. C., president; C. M. Smith, vice president, and Dr. W. K. Gunter, secretary and treasurer. Dr. Gunter has been manager of the Palmetto Damask Mills for the past three years.

## Contract for Victor Plant Addition.

Greer, S. C., June 25—[Special]—Contract has been awarded to the Gallivan Building Co., of Greenville, by the Victor Monoghan Co., main office in Greenville, for additions to the mill building of the Victor plant here. The building will be three stories and basement, 71 by 79 feet, of mill construction. Additional installation of 120 looms will be made, together with warping and slashing machinery.

J. E. Sirrine & Co., of Greenville, are the engineers.

## New Cotton Mill for Roxboro—Philadelphia Interests to Build Plant.

A new cotton mill will be erected near Roxboro, N. C., by A. T. Baker & Co., Inc., of Philadelphia, in co-operation with local capital. In connection with the enterprise, the company wires the MANUFACTURERS RECORD:

"Proposed mill will be for the manufacture of fine cotton fabrics. Initial unit to be one story, daylight construction, 192 by 96 feet, to house 30 looms and necessary equipment. Power will be purchased. J. E. Sirrine & Co., Greenville, S. C., are engineers; G. W. Kane, Roxboro, contractor."

## Princeton Hosiery Mills to Enlarge.

Princeton, Ky.—Plans are being made by the Princeton Hosiery Mills for the erection of an addition to their plant here to cost about $25,000, and the installation of $5000 worth of new machinery, also a water softening machine to cost several thousand dollars. This plant enjoys the distinction of having operated every day since its opening several years ago. Judge G. G. Harralson is the president of the company.

## Textile Mill Notes.

A site has been surveyed for the proposed cotton mill at Geneva, Ala., to be erected by D. H. Morris and others. The plant will be located on the Louisville & Nashville railroad about one mile west of the courthouse. There are 60 acres in the tract.

Work has begun on taking down and crating the machinery at the cotton department of the Pacific Mills, Lawrence, Mass. This machinery will be installed in the new $5,000,000 plant under construction at Lyman, S. C. Lockwood, Greene & Co., engineers of Boston are in charge of the work.

## Government's Industrial Motion Picture Films Are in Demand.

Eighty different industrial motion picture films are now in the possession of the Department of the Interior. These motion picture films were produced at small cost to the Government, practically the entire cost being borne by the various industries filmed. Each film depicts the various processes employed in the manufacture and marketing of some well-known American product wholly or partly of mineral origin. The films are loaned free to technical societies, commercial organizations, colleges, schools, and churches, and are in constant demand.

Three motion pictures have been completed by the Bureau of Mines during the past month. One, "The world's struggle for oil," portrays graphically the history of the oil industry from early Biblical times up to the present day. Another is the "Story of the gasoline motor," which visualizes in striking manner the complete operation of a gasoline engine. The third picture, "The story of refractories," presents typical scenes in the manufacture of refractory brick and other refractory products. Applications for the films should be addressed to the Department of the Interior, Bureau of Mines, Pittsburgh, Pa.

## Bulletin on Maryland Farm Statistics.

The Extension Service of the University of Maryland has issued a bulletin containing farm statistics of the state, the figures being based on reports from crop-correspondents, chiefly farmers. The bulletin reviews individual crops during 1922, and contains tables showing by counties the acreage, yield, production and value at the farm of the important crops. It contains also material relating to the price of farm products, data on farm wages and farm values. The crop yields by counties are summarized, and the second half of the bulletin is devoted to the Maryland livestock industry.

# GOOD ROADS AND STREETS

## Tennessee Road Contracts Total Over $1,100,000.

Nashville, Tenn., June 30. [Special.]—Contracts have been awarded by the State Department of Highways and Public Works for the construction and surfacing of roads to cost $1,107,000. These projects include 14.7 miles of concrete pavement between Jackson and the Haywood County line in Madison County, for which Harry D. Mays of Worthington, Ind., was awarded contract at $484,000, the same contractor receiving the award at $105,000 for bridges over a 20-foot span on the same road.

Contract for 2.2 miles of bituminous penetration surface on a coarse stone base in Montgomery County, including the approach fill to the Cumberland River bridge, was awarded at $130,000 to the Moore Construction Co. of Nashville, and contract for 21.2 miles of grading, drainage and burnt slate surfacing between Monteagle and Altamont in Grundy County, was awarded to the Brown Contracting Co. of Chattanooga at $196,000. Boyd Williams of Murfreesboro, Tenn., was awarded contract at $35,000 for surface treating 13.24 miles in Overton County, between Livingston and the Pickett County line, and the same contractor secured the award for 12.06 miles of bituminous macadam surfacing on a hand placed base in Overton County between Livingston and the Putnam County line.

## Alabama Lets Contracts for Over $646,000—Projects Embrace 44 Miles of Roads and Several Bridges.

Montgomery, Ala., June 30—[Special.]—Contracts have been awarded by the State Highway Department for the construction of 32 miles of road and a number of bridges and culverts in St. Clair County, between Birmingham and Gadsden, and for graveling, grading and draining more than 12 miles of road between Brantley and Dozier, the aggregate cost amounting to $646,490.

For section A on the Birmingham-Gadsden road, Phillips & Co. of Birmingham were awarded contract at $165,570 for grading and laying concrete on more than 16 miles, and for section B of same road, Donohue & Co. of Tuscaloosa were awarded contract at $177,490 for grading and laying concrete on more than 15 miles. For section C, embracing bridges on the same road, the W. C. Howton Contracting Co. was awarded contract at $49,196.

Fountain & Myers of Hattiesburg, Miss. were awarded contract at $254,234 for the road from Brantley to Dozier.

W. S. Keller is the state highway engineer, with offices in Montgomery.

## North Carolina Borrows $5,000,000 for Roads—Will Require $10,000,000 More.

Raleigh, N. C.—North Carolina has borrowed $5,000,000 and will soon negotiate another loan of $10,000,000, it being estimated that $15,000,000 will be required to finance the construction of highways during the next year. The negotiations involve the sale of five of the State's notes running for twelve months, this action being taken, it is stated, because the State has decided to offer no more bonds at least before next January.

The $5,000,000 loan was procured in New York by Ben Lacy, State Treasurer, the notes bringing par, and it is expected that Mr. Lacy will soon negotiate the sale of the $10,000,000 short term notes.

The funds will make possible the continuance of North Carolina's big road building program and at the same time puts the State in a position to withhold its bonds from the market until prices improve.

## Bids in August on $800,000 Ashley River Bridge.

Charleston, W. Va.—The County Sanitary and Drainage Commission will open bids August 14 for the construction of the Ashley River bridge, estimated to cost $800,000. The structure will be 1733 feet long and 43 feet wide, of concrete construction, with a draw 20 feet above the river surface at high water.

The opening through which vessels are to pass will be 138 feet wide and the distance between the two piers 202 feet. The channel at this point is said to be 110 feet wide, allowing ample room for vessels.

About a year and a half will be required for the completion of the bridge.

## Contracts Let for Two Kentucky Roads to Cost $200,000—Other Work Proposed.

Frankfort, Ky., June 30—[Special.]—The State Highway Department has awarded contracts to build two sections of road to cost about $200,000, including one in Jessamine County, for which William Lutes & Co. of Lexington, Ky. were awarded contract at $117,477, using mapped limestone base, tunnel excavation, cement rubble masonry and concrete pipe, and one in Powell County, for which the Costello Brothers Co. of Knoxville, Tenn., was awarded contract at $77,183, using cement rubble masonry and concrete pipe. R. B. Tyler & Co., of Louisville were awarded contract at $5908 for oil surface treatment of a road in Jessamine County.

Plans are being prepared by the State Highway Department for grading and surfacing the Whitley City-Somerset road in McCreary County, from Whitley City to the Pulaski County line, a distance of 14,581 miles.

## Tax on Lubricating Oils and Additional Tax on Gasoline Recommend by Georgia State Highway Department.

Atlanta, Ga., June 25—[Special.]—A new gasoline tax of 2 cents a gallon and a tax on lubricating oils, creating a state road fund with which to help the weaker counties of the state, were recommended today by the Georgia State Highway Department.

The report shows that most of the larger counties in the state have practically completed their state road projects, so that the smaller and financially weaker counties would be the ones benefitted by the proposed new tax on gasoline.

Another point brought out in the report is that an additional tax on gasoline and lubricating oil would be borne by the tourist as well as natives of Georgia, and that tourists would be perfectly willing to pay the extra taxes for the benefit of first-class roads throughout the state. North Carolina, South Carolina, Florida and Alabama already have such a tax, it was pointed out, compelling tourists to pay at least part of the cost of building and maintaining the roads over which they travel.

## Good Roads Notes.

The city council of Miami Beach, Fla. has awarded a contract to John J. Quinn Co. of Miami, at $132,000 for street paving.

Contract has been awarded at $189,500 to the Hornaday Construction of Memphis, Tenn. for the construction at Central City, Ky., of 30,500 lineal feet of concrete curb and gutter, 21,000 cubic yards of earth and rock excavation and embankment, 49,500 square yards of rock asphalt pavement on a stone macadam base.

# LUMBER AND BUILDING MATERIALS

## Seasonal Recession in Lumber Movement.

Washington, June 28.—Following the usual seasonal curve, the nation's lumber movement for last week was curtailed rather noticeably, as indicated by reports to the National Lumber Manufacturers Association here from 385 mills, the number reporting, however, being 48 less for the preceding week. As compared with the corresponding week of last year production gained, and shipments and new business fell off, the latter only slightly.

The reporting mills as a whole gave their shipments as 90 per cent and their orders as 75 per cent of current production. The corresponding percentages for Southern pine mills, by themselves were 87 and 80, and for the West Coast mills, 100 and 81. For the 348 mills, with reported normal production, actual production was 107 per cent, shipments 99 per cent and orders 82 per cent of normal production.

The Southern Pine Association, New Orleans, wires that there was a decrease of about 15 per cent in orders, 11 per cent in production, and 13.5 per cent in shipments last week, as compared with the previous week. Of 81 mills reporting running time only 38 operated full time on account of unfavorable logging weather. Unfilled orders are 269,000,894 feet as against 274,266,372 feet at the end of the preceding week, according to reports from 134 mills.

Telegraphing from Seattle, the West Coast Lumbermen's Association reports that production for last week was 27 per cent above normal, new business 19 per cent below production and shipments 23 per cent above the latter. Of the new business 38 per cent was for future water delivery, amounting to 34,207,603 feet, of which 21,078,863 was for domestic cargo delivery, and 13,136,740 new export business. New business by rail amounted to 1729 cars. Forty-one per cent of the week's lumber shipments moved by water, amounting to 45,966,706 feet, of which 29,410,405 was coastwise and intercoastal, and 16,556,301 feet overseas. Rail shipments totaled 2047 cars. Unfilled domestic cargo orders totaled 148,278,379 feet. Unfilled export orders amount to 84,227,219 feet and unfilled rail trade orders are 6895 cars.

From Norfolk, Va., the North Carolina Pine Association, representing mills from Virginia to Alabama, reports that production is easily 40 per cent below normal and that there is no hope of mending this condition until early fall, when it is hoped labor will be more plentiful. Shipments throughout the Carolinas and Virginia are running "pretty well" ahead of orders, as well as ahead of actual production. Some heavy sales are reported. Georgia and Alabama are still suffering from excessive rain, coupled with labor shortage. Many mills in that section are refusing new business because of low production and the fact that well-seasoned stock is extremely scarce.

The California Redwood Association telegraphs from San Francisco that weather conditions are favorable, the log output good and some mills working two and three shifts. There are no labor troubles; the demand for lumber is good, with signs of improvement in the immediate future.

From San Francisco, also, the California White & Sugar Pine Manufacturers Association reports generally normal conditions except that stocks are low.

The Western Pine Manufacturers Association, Portland, Oregon, wires that identical mills show a 30 per cent increase in orders compared with the previous week, which is the best showing in new business since May 5. Shipments and production also increased.

The following table records the lumber movement for the week ending June 23, as compared with the corresponding week of 1922 and the preceding week of 1923:

| | Past Week | Corresponding Week 1922 | Preceding Week 1923 (Revised) |
|---|---|---|---|
| Mills | 385 | 382 | 423 |
| Production | 262,558,515 | 236,118,664 | 281,008,687 |
| Shipments | 236,173,281 | 253,071,849 | 253,671,719 |
| Orders | 196,578,518 | 203,832,322 | 213,886,945 |

As compared with the first twenty-five weeks of last year the lumber movement so far this year is as follows:

| | Production | Shipments | Orders |
|---|---|---|---|
| 1923 | 5,923,379,202 | 6,375,129,172 | 6,406,155,699 |
| 1922 | 5,028,912,118 | 5,111,829,397 | 5,525,903,201 |
| 1923 Increase | 894,467,084 | 1,263,299,775 | 880,252,498 |

## Progress of Lumber Standardization.

By the action taken at its meeting in Chicago on June 22-23, the Central Committee on Lumber Standards has largely paved the way for a general standardization conference to be composed of accredited representatives from all affiliated organizations interested in the standardization

LUMBER MOVEMENT FOR TWENTY FIVE WEEKS, AND FOR THE WEEK ENDING JUNE 23.

| | Production | | Shipments | | Orders | |
|---|---|---|---|---|---|---|
| | 1923 | 1922 | 1923 | 1922 | 1923 | 1922 |
| Southern Pine Association: | | | | | | |
| Total | 1,867,648,791 | 1,762,252,811 | 1,984,005,622 | 1,796,340,488 | 1,808,873,408 | 1,931,572,279 |
| Week (134 mills) | 69,400,255 | 70,154,666 | 60,626,420 | 80,232,750 | 55,360,942 | 67,916,875 |
| West Coast Lumbermen's Ass'n: | | | | | | |
| Total | 2,484,355,172 | 2,026,042,669 | 2,735,872,516 | 1,987,693,003 | 2,590,617,939 | 2,051,369,447 |
| Week (130 mills) | 112,787,008 | 89,184,851 | 112,228,929 | 99,789,898 | 90,929,826 | 71,692,562 |
| Western Pine Mfrs. Association: | | | | | | |
| Total | 637,733,000 | 453,193,000 | 660,863,000 | 588,717,000 | 617,425,000 | 643,400,000 |
| Week (39 mills) | 35,529,000 | 35,492,000 | 24,960,000 | 36,549,000 | 24,500,000 | 30,900,000 |
| Calif. White & Sugar Pine Mfrs.: | | | | | | |
| Total | 295,700,000 | 140,631,000 | 246,611,000 | 134,429,000 | 616,565,000 | 273,170,000 |
| Week (9 mills) | 9,628,000 | 10,933,000 | 5,157,000 | 7,267,000 | 4,089,000 | 9,371,000 |
| Calif. Redwood Association: | | | | | | |
| Total | 215,694,000 | 184,853,000 | 230,999,000 | 175,772,000 | 240,426,000 | 182,080,000 |
| Week (15 mills) | 10,475,000 | 7,708,000 | 12,648,000 | 7,219,000 | 6,815,000 | 6,448,000 |
| North Carolina Pine Association: | | | | | | |
| Total | 226,420,256 | 214,635,867 | 240,616,434 | 200,122,501 | 193,312,452 | 209,135,475 |
| Week (30 mills) | 5,413,252 | 9,287,453 | 5,127,932 | 9,179,079 | 1,754,750 | 8,227,885 |
| Northern Hemlock & Hardwood: | | | | | | |
| (Softwood) Total | 63,150,000 | 49,236,000 | 66,719,000 | 65,343,000 | 62,184,000 | 65,576,000 |
| Week (17 mills) | 2,912,000 | 2,411,000 | 2,709,000 | 3,104,000 | 2,373,000 | 2,353,000 |
| Northern Pine Mfrs. Association: | | | | | | |
| Total | 235,204,600 | 198,067,771 | 209,442,600 | 163,412,405 | 186,751,900 | 169,600,000 |
| Week (11 mills) | 13,832,000 | 10,947,694 | 8,926,600 | 9,731,122 | 7,050,000 | 6,923,000 |
| General Total for 25 weeks: | | | | | | |
| (Softwood) | 5,923,379,202 | 5,028,912,118 | 6,375,129,172 | 5,111,829,397 | 6,406,155,699 | 5,525,903,201 |
| Northern Hemlock & Hardwood: | | | | | | |
| (Hardwood) 25 weeks | 84,378,000 | ..... | 73,455,000 | ..... | 68,956,000 | ..... |
| General Total for Week | 262,558,515 | 236,118,664 | 236,173,281 | 253,071,849 | 196,578,518 | 203,832,322 |

of lumber, to be held at the Department of Commerce in Washington next fall, to take final action on its recommendations. which will be binding on the entire lumber industry.

At the recent meeting in Chicago, the Consulting Committee on Lumber Standards submitted a number of its recommendations to the Central Committee which were approved with very few changes.

Briefly, the recommendations as approved cover standardization of lumber sizes, simplification of grade names, and the guaranteeing of quality and quantity through grade-marketing and inspection service.

Some of the recommendations are that standard finished yard boards should be not less than 25/32 inch thick, and that standard finished dimension should be not less than 1-5/8 inch thick.

## Heavy Increase of Production and Shipment of Cement for Five Months.

A report compiled by the Geological Survey shows that in the first five months of 1923 a much larger part of the year's requirements for Portland cement in building and road construction has been produced and shipped than in the same period of any previous year. The increase over last year was more than 40 per cent.

Ordinarily these are months of light demand but on account of increased building activity, efforts have been made by the cement manufacturers to spread the demand over the entire year in order to relieve the peak load on this industry and to insure prompt delivery as well as an adequate supply.

Shipments up to May 31 this year exceeded shipments in the same period last year by upwards of 14,000,000 barrels. Production was approximately 50,000,000 barrels as against approximately 35,600,000 barrels produced in the same 5-month period in 1922. Shipments totalled approximately 48,900,000 barrels as against about 34,600,000 barrels shipped during the first five months of 1922, the best previous record.

## Lower Figures on Production Sales and Shipments.

The Southern Pine Association for the week ended June 22 reports as follows on 134 mills:

| | Cars | Feet |
|---|---|---|
| Orders on hand beginning of week | 13,074 | 274,266,372 |
| Orders received during week | 2,639 | 55,360,942 |
| Total | 15,713 | 329,627,314 |
| Shipments during week | 2,890 | 60,626,420 |
| Orders on hand end of week | 12,823 | 269,000,894 |

Production for the week was 69,400,255 feet. Shipments were 8,773,835 feet below production or 12.64 per cent., and orders were 14,039,313 feet below production, or 20.23 per cent. Orders were 8.69 per cent., or 5,265,478 feet below shipments. The week was 18.31 per cent or 15,558,292 feet below normal production and orders were 34.84 per cent, or 29,597,605 feet below normal production. The decrease in orders on hand amounted to 5,265,478 feet, or 1.92 per cent.

## Five Month Period Sets Record for Production and Shipment of Southern Pine.

New Orleans, June 29—New high records for production and shipments of Southern pine lumber for the first five months of the present year are indicated by figures from 100 identical mills, compiled and made public by the Southern Pine Association.

These figures show that shipments for 1923 to June 1, total 1,548,611,428 feet from the 100 identical mills which have been reporting for the last nine years. This is the greatest volume of Southern pine shipments from the 100 mills for the first five months of any year in the records of the Association. Production aggregates 1,419,726,312 feet which is greater than for any similar period since 1916.

## North Carolina Pine Report.

The North Carolina Pine Association reports as follows on 52 mills for the week ending June 23:

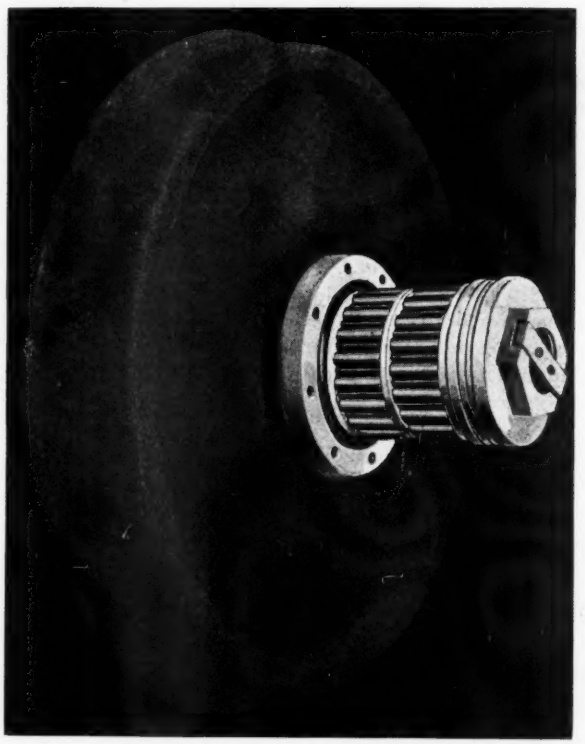
| | Total Feet | Average per Mill |
|---|---|---|
| Orders | 4,769,750 | 91,726 |
| Shipments | 11,536,232 | 221,850 |
| Production | 10,478,941 | 201,518 |
| Normal Production | 15,714,000 | 302,173 |

The orders were 59 per cent below shipments, 54 per cent below actual production and 68 per cent below normal production. Shipments were 10 per cent above actual production and 26 per cent below normal production. The actual production was 33 per cent below normal. The week shows a decrease in orders of 374,245 feet or 7 per cent.

# MECHANICAL

## Roller Bearings for Railroad Cars.

The Stafford roller bearing for railroad cars and which may also be applied to locomotive turntables, is illustrated herewith together with a statement of the results of tests made to demonstrate the effectiveness of the device by reducing friction to a minimum. The bearing, which is made by the Stafford Roller Bearing Car Truck Corporation, Lawton, Mich., consists of two rows of solid chrome steel rollers mounted in a substantial steel frame and they are staggered in such a manner as to give the weight carried a continuous



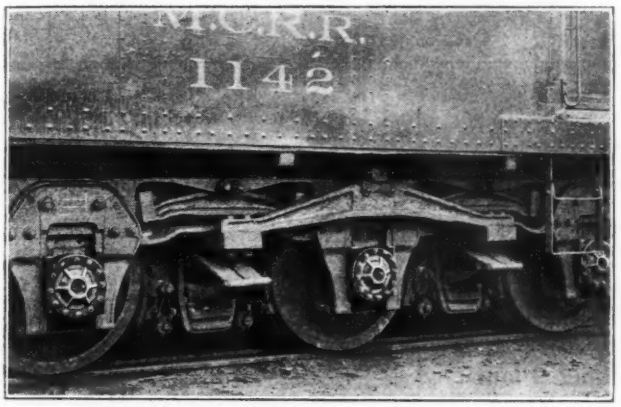
ROLLER BEARING AS APPLIED.

supporting surface. The manufacturers state that the successful combination of these two vital features—solid rollers and staggered arrangement—gives to the assembly the essentials to overcome friction in railroad car journals by means of roller bearings and they claim that journal attrition is reduced fully 90 per cent.

It is further stated that this bearing will stand up under twelve years of continuous service. About 2½ pounds of lubricant is applied to each journal box and will, it is claimed, last for a minimum of two years, the lubricant being sealed to keep out dust and dirt. There is an indicator to show the quantity of lubricant so that the box does not have to be

opened for inspection. End thrust of the axle is taken care of by a frictionless thrust bearing and two thrust plates.

The Michigan Central Railroad reported the result of a test of a car equipped with the Stafford roller bearings in comparison with another car equipped with ordinary bearings, showing that the car with roller bearings ran 912 feet on level track as compared with 154 feet for the car with ordinary bearings, each having run the same distance down a grade to give them a start for the test. But it is important to observe that the car with roller bearings when cut off



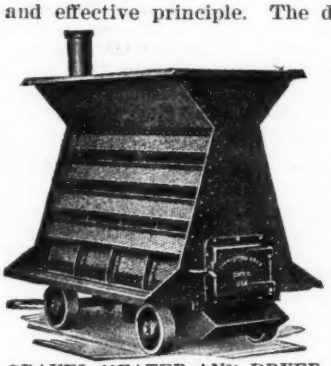

RAILROAD CAR TRUCK WITH ROLLER BEARINGS.

started down the grade without aid, while the other car had to be pushed by an engine before it would start down from the same point. The car equipped with roller bearings ran about six times as far on the level track as did the other car.

The roller bearings can be used on either freight or passenger train cars and they will it is claimed effect great economies in railroad practice. Another test reported is that a flat car loaded with axles to a gross weight of over 122,000 pounds was pushed by one man on a level track. Cars with the new bearing have already been run satisfactorily for six months in regular service. It is claimed that use of these bearings generally would result in saving 50 per cent of locomotive fuel and 75 per cent of lubricants, besides doing away with the use of waste, brasses, etc. used with ordinary journal box equipment.

## Device for Heating and Drying Gravel.

A gravel heater and dryer for the use of contractors and municipal or county organizations on road or street work is manufactured by Littleford Bros., Cincinnati Ohio, who say that it possesses many advantages by making use of a simple and effective principle. The device is patented and will, it is stated, be appreciated by everyone requiring hot dry stone or gravel for their work.



GRAVEL HEATER AND DRYER

This heater and dryer, which is known as No. 74, is manufactured under the C. A. Mullen patent and the principle that is utilizes secures results so that the combined power of heat and ventilation make drying and heating rapid and thorough. It is made entirely of plate steel and consists of a large fire chamber with sloping walls of perforated steel extending upward to a point at the base of the charging hopper. At different levels, but uniformly spaced from these walls, are additional perforated walls or flights.

Material to be dried is loaded into the hopper at the top and is fed by gravity into the open flights on both sides of the heater. As it is suspended in a thin layer against the perforated sides of the fire chamber the heat passes directly to and through it carrying away all moisture and the hot, dry material is continually fed to the base of the heater whence it is easily removed.

The heater and dryer is mounted on heavy steel wheels and axles which are machine turned and fitted with standard axle nuts, and it has a handle for pulling it about. It is made in two sizes with heating capacities respectively of two and four tons an hour.

## Oil in Lee County (Va.) Well.

Oil has recently been found in a well near Rose Hill, Lee County, Va., in the southwest corner of the state, reports the Department of the Interior. Its occurrence there is of uncommon interest because the place is in the Appalachian Valley, where the presence of oil in commercial quantities has been doubted by geologists, and because the oil oozes from the rocks of a formation that lies in an abnormal position—the Clinton formation, which is here entirely surrounded and apparently overlain by the Knox dolomite, a formation that normally lies 5000 to 6000 feet below the Clinton. It remains to be seen whether the occurrence is of commercial or merely of scientific and local interest.

## Pipe Line Planned in Prairie Lea Field.

Prairie Lea, Tex., June 22—[Special.]—The Magnolia Petroleum Company has applied to the county commissioners for right of way for an oil pipe line which it plans to build from the producing wells in the Prairie Lea field to a connection with the San Antonio & Aransas Pass Railroad at Luling. Loading racks to accommodate sixty cars a day are to be built.

# Commendations, Kicks and Comments

### A Wonderful Paper.

B. F. SMOOT, Laurinburg Electric Service Company, Laurinburg, N. C.—The MANUFACTURERS RECORD is a wonderful paper.

### Good Reading.

J. T. PRESTON, Secretary-Treas., Chamber of Commerce, Alexandria, Va.—I am enclosing our voucher check for $10.00 which covers our subscription to the MANUFACTURERS RECORD for two years. We consider it the very best publication that we have on our reading table.

### The Exponent of America.

BRIGHAM REALTY & INVESTMENT CO., Miami, Fla.—Send us the MANUFACTURERS RECORD for a six months period commencing with the May issues as we wished to read your editorials in those issues.

We are glad you write editorials on Americanism and not confine yourself to purely trade material.

Your paper is certainly filling a need in that line.

### Permission Freely Given.

S. E. TUCKER, Secy.-Treas. Columbia Panel Manufacturing Company, Thomasville, N. C.—I have just read your article, "Are You an Honest Law Abiding Patriotic Man" in your issue of June 21. I consider this one of the most masterful editorials on the prohibition question I ever read. I am having several hundred copies struck off, as per copy I am enclosing. I wish to distribute these among our help and through the mail; with your permission.

### A Pioneer Developer of the South.

FRED. D. HAMRICK, Quinn, Hamrick & Harris, Rutherfordton, N. C.—Enclosed you will find check for one of your "Blue Books." Last year I bought one dozen and distributed them among the business and professional men of this country. I am going to take this matter up with our Chamber of Commerce and ask them to purchase a number of these books to be distributed over the town and county.

You are, and have been, one of the pioneer developers of the South. Your views on economic, political and social questions are absolutely sound and rest on the sill upon which the RECORD was founded. It is very refreshing to me to read your magazine after seeing so much of the impractical "isms" and theories advanced by wholly impracticable people. May you live many years to carry on this important work in which you are engaged!

# Construction Department

**EXPLANATORY**

Additional information is published about all enterprises mentioned in this department as soon as such data can be obtained. Further facts about any incomplete or incorrect item reported in these columns are always appreciated.

**DAILY BULLETIN**

The Daily Bulletin is published every business day to enable its subscribers to follow up promptly the industrial, commercial, railroad, financial, building and general business development of the South and Southwest. To machinery manufacturers and dealers, contractors, engineers, and others who require daily information of every new enterprise organized and details about important additions to enterprises already established, the Daily Bulletin is invaluable. Subscription price, $20.00 a year.

## Bridges, Culverts and Viaducts.

Alabama — State Highway Dept., Montgomery, Ala., let contract for 5 bridges and culverts. Details under Road and Street Construction.

Fla., Safety Harbor — State Road Dept., Tallahassee, Fla., receives bids until July 5 to build north and south approaches to Safety Harbor Bridge, on Road No. 17, Proj. 527; 1555 ft. long; plans, etc., on file, and from Div. Engr., Lakeland, Fla.

Fla., St. Petersburg—Details under Road and Street Construction.

Ga., Macon—Central of Georgia Ry. Co., C. K. Lawrence, Ch. Engr., Savannah, contemplates building bridge at Second St.

Ky., Louisville—Louisville & Nashville R. R. Co., plans building.
350 ft. steel bridge over Rolling Fork; W. H. Courtenay, Ch. Engr.

Miss., Biloxi—City receives bids until July 3 to construct Eran Saucier Bridge across Saucier Creek, on Saucier and Biloxi road, about 4 mi. southeast of Saucier. Address Board of Supvrs.

Okla., Bartlesville — Washington County plans building 317-ft. bridge over Caney River at 7th St.; will invite bids soon. Address County Commrs.

S. C., Anderson—Details under Road and Street Construction.

S. C., Cartersville — Florence and Lee Counties plan rebuilding Cartersville Bridge, across Lynch's River; wooden structure; E. D. Sallenger, Chmn. of Governing Comn.

S. C., Charleston—Charleston County Sanitary and Drainage Comn., will receive bids until Aug 14 for steel girder or concrete bridge across Ashley River at foot of Spring St.; cost $800,000; Federal aid $350,000; City $125,000, and balance from County; also authorized contract for Water Front Foundation Co., at $5143 to repair St. John's Island Bridge, over Stono River.

S. C., Effingham—State Highway Dept., Columbia, S. C., plans 817 ft. wood and steel bridge over Lynch's River at Effingham; estimated cost $47,467, government to pay half.

Tennessee—Details under Road and Street Construction.

Tex., Angleton—Details under Road and Street Construction.

Tex., Beaumont — Jefferson County will probably receive bids until August 7 for bridge across Neches River at Beaumont; A. C. Love, Highway Engr.

Tex., Crockett — Hurricane Shoals Bridge Co., capital $25,000, incorporated with Mose Bromberg, Pres.; F. A. Smith, V. P.; J. C. Miller, Sec.; plans building 440-ft. steel bridge across Trinity River at Hurricane Shoals; approximate cost $19,000; also plans expending about $7000 for roads.

West Virginia — State Road Comsn., Charleston, W. Va., will receive bids until July 24 to build 2 bridges and culverts as follows:
3138—Mason County, Five Mile Bridge No. 857, 60-ft. span concrete deck girder, and Three Mile Bridge No. 858, 35-ft. span concrete deck girder; 2064, Ohio County, Springdale Culvert, 8x10 concrete arch; E. B. Carskadon, Secy., State Road Comm.

## Canning and Packing Plants.

Fla., Bradentown—Florida Citrus Exchange has acquired site and will erect canning plant.

## Coal Mines and Coke Ovens.

Ala., Birmingham — Details under Water Works.

Tenn., Knoxville—Morgan Coal Co., increased capital from $10,000 to $20,000.

Va., Big Stone Gap — Sandy Ridge Coal Corp., capital $350,000, chartered with James W. Gerow, Pres.; R. T. Irvine, Sec.

West Virginia—John A. Boone, of Beckley, W. Va., has acquired the Lynwin Coal Co.'s plant at Mistletoe, including the improvements and Beckley seam of coal; will develop.

## Concrete and Cement Plants.

Ga., Macon—Clinchfield Portland Corp., Kingsport, Tenn., will build $1,000,000 Portland cement plant about 23 mi. below Macon on Georgia Southern and Florida Div. of the Southern Railway; will use wet process system, each unit of machinery to be equipped with individual motor drive; initial units to have capacity of 2000 bbls. per day, plant to be designed so that output may be increased; buildings to be of concrete and steel construction; contracts for these and for furnishing machinery and equipment will soon be awarded.

Tex., Fort Worth—Southwestern Portland Cement Co., O. J. Binsford, Sec.-Supt., 613 Two Republics Bldg., El Paso, Tex. have acquired 671½ acres between the Houston & Texas Central Ry. and I. & G. N. Ry. within switching limits of Fort Worth, will erect 3000 bbl. Portland cement plant, of reinforced concrete construction, will be a dustless, wet process plant; engineering work done by Company's Engrs.; and majority of construction by owners; all preliminary work completed including laying of railroad connections, trackage materials and storage warehouse built. (Previously noted.)

## Cotton Compresses and Gins.

Ark., Beech Grove—Planters' Gin Co. of Paragould, Ark., will erect cotton gin.

Ga., Sylvania—Details under Lumber Enterprises.

Miss., Batesville—Planters Gin Co., capital $14,000, incorporated by T. T. O'Bryant, W. D. Harmon, L. B. Lester.

Miss., Ellisville—Ellisville Gin Co., lately noted incorporated with $7000 capital by L. R. Anderson and others has site and will erect cotton gin.

Mo., Morley—Mississippi County Elevator & Grain Co. of Charleston, Mo., interested in erection of 4-stand cotton gin.

Okla., Frederick—Farmers Gin Co., capital $30,000, incorporated by C. Brunk, W. M. Kemp, Sam Prescott.

## Cottonseed-Oil Mills.

Ark., Hope—Temple Cotton Oil Co. is rebuilding plant previously burned; J. A. Sullivan, Contr., Hope.

Miss., Jonestown—Eastman Cotton Oil Co., capital $50,000, incorporated by W. E. Gage, J. F. Waggoner.

## Drainage and Irrigation

Fla., Fort Pierce—W. H. Byington, 527 Fifth Ave., New York City, interested in the formation of a new St. Lucie County Drainage Dist. for the purpose of draining approximately 145,000 acres land in a section bounded on north by the south line of Fellsmere River Farms Dist., on east by the west line of Indian River Farms Drainage Dist., Fort Pierce Farms Drainage Dist. and North St. Lucie River Drainage Dist. The four existing drainage districts cover approximately 200,000 acres and plans are under way now to construct additional canals to complete system, the estimated cost being $500,000; also plans to improve and complete system in Fellsmere Drainage Dist. Preliminary engineering work to be done by George B. Hills, Jacksonville, Fla. Officers of the proposed new district have not been selected. (Lately noted.)

Fla., Palm City—Palm City Drainage Dist. Supvrs., let contract to F. A. McKenzie, of Miami, at $75,000, to complete drainage and irrigation system started some years ago by the Palm Beach County Land Co., of the 14,300 acres in the district, 1000 acres is muck and the remaining is pine land; has $88,000 available for work.

Fla., Stuart—The Riddle Co. of West Palm Beach, Chief Engineers for the Pahokee Dist., have completed survey work, and presented preliminary plans to F. C. Elliott, Ch. Drainage Engr.; district comprises 22,000 acres fronting on Lake Okeechobee between Pahokee and Pelican Bay; plans calls for 12 mi. dyke around edge of the area to be drained; will connect with the state owned dyke on Lake Okeechobee frontage and with the dyke on south boundary of the Pelican Lake Drainage Dist.; along every dyke will run drainage ditch offering double protection; plans also provide for irrigation during dry seasons as efficiently as drainage during wet periods.

Tex., Ballinger—Colorado Valley Irriga-

tion Association, wires *Manufacturers Record*: "Petitioning for election to create Coke Runnels Water Improvement District No. 1 affecting 200,000 acres adjacent to Ballinger, Bronte and Miles, State Water Board to hold hearing July 1; creating or district assured; propose to erect concrete dam in Coke County, 2000 ft. long, 100 ft. high, impounding over half million acre feet water in reservoir 30 mi. long and 4 mi. wide; approximate cost of project $4,500,000; Consulting Engrs. not selected but C. C. Holder, of Bronte, acting."

Tex., Bronte—Colorado Valley Irrigation Assn. will reclaim 150,000 acres land in Colorado Valley; C. C. Holder, Engr.

Tex., Houston—Harris County and Drainage Dist. No. 2 receive bids until July 16 for drainage ditch along the Webster Airline road and cleaning old ditch in drainage district No. 2; H. L. Washburn, County Auditor.

## Electric Light and Power Plants.

Ala., Gadsden — Alabama Power Co. will construct transmission line to Citico mines; line will be about 8 mi. in length and will furnish power for operation of mining machinery at the Etowah mines in North Gadsden and Citico mines.

Ark., Camden—See Waterworks.

Ark., Conway—City Council let contract to De la Vergne Machine Co., New York, for a 200 h. p. oil-burning engine and electric generator to be installed at light and power plant; cost $22,000.

Md., Catonsville—Details under Land Developments.

Mo., Bolivar—City will construct power plant; Alexander & Baity, Engrs., Springfield, Mo.

Mo., Cameron — Details under Water Works.

Mo., Stockton—City will construct hydro electric plant on Sac River near Stockton; 130 ft. dam, power house 25x40 ft., concrete; cost $50,000; building 18 mi. transmission line; initial development 200 h. p., ultimate development 400 h. p.; Geo. S. Russell of Russell & Axon, Engr., 404 McDaniel Bldg., Springfield, Mo. (Laely noted.)

N. C., Asheville—Government under supervision of Major Harold C. Fiske, will begin survey of French Broad River with view of deciding feasibility of creating lake covering 26,000 acres and development of hydroelectric power.

N. C., Whitakers — Town receives bids until July 11 to furnish all material, apparatus, equipment, etc., necessary and for construction of 3 phase, 6600 volt wood pole transmission line between Town of Whitakers and Town of Enfield, approximate length 6 mi.; G. W. Taylor, Mayor; W. T. Hearne, Supt. Lighting Dept.

Okla., Muskogee—J. W. Martin, of Wagoner, Okla., interested in development of power plant on Illinois River, near Gore; N. T. Veatch, Conslt. Engr., Kansas City, Mo.

Tenn., Trezevant—Details under Water Works.

Tex., Houston—Details under Land Developments.

Tex., New Braunfels—Details under Flour, Feed and Grist Mills.

Tex., Temple—City Commrs. plan extension of white way system to include City Park and public square.

Va., Burkes Garden—John P. Gose plans installing electric power plant on water falls of the Garden, to supply current for lighting, etc.

Va., Kilmarnock — Kilmarnock Light & Power Co., capital $10,000, incorporated with W. L. Mason, Pres.; W. B. Lee, Sec.; will distribute electric current in Lancaster and Northumberland Counties.

## Flour, Feed and Meal Mills.

Ga., Sylvania—Details under Lumber Enterprises.

Tex., New Braunfels—Landa Milling Co., capital $1,500,000 incorporated by Harry Landa, of New Braunfels, Larkin F. Price, of Devine, Texas, and others; has taken over and will operate grist mill, flour and oil mill, stone and crushing plant and electric light and water plant.

## Foundry and Machine Plants.

Ga., Rome—Rome Stove & Range Co. let contract to J. A. Stein, 806 James Bldg., for the concrete work on the plant now under construction.

Ky., Ashland—Grayson & Dressel Manufacturing Co. will occupy 10,000 sq. ft. of floor space in the Leffingwell Bldg., on Front St.; are now equipping with new machinery for the manufacture of "Radiant Fire" gas stove; present daily output 50 stoves to be increased to 200 daily.

Va., Richmond—Virginia Iron & Metal Co., L. Bernstein, Pres., has acquired the Seven Pines Ordnance Reserve Depot, including 1268 acres land with 125 steel warehouses and several frame buildings ranging from 70 to 210 ft. long, water, sewerage and light system; will locate manufacturing plant along with own plant.

## Gas and Oil Enterprises.

La., Monroe — Central Carbon Co., C. E. Slagle, Pres. will construct $500,000 carbon black and gasoline extraction plant. (Lately noted.)

La., Monroe—Urania Petroleum Co., Ltd., of London, Engr., W. E. Hall, local director, offices at Monroe, will drill three wells in La Salle Parish near Urania; Noe Oil & Gas Co., of El Dorado, Ark., has contract for first well; company has 6000 acres of oil, gas and mineral rights and will expend $250,000 in development.

Md., Catonsville—Details under Land Developments.

Miss., Hattiesburg — R. G. Woten, Ellis Hickman and others interested in organizing company with $150,000 capital to develop oil lands.

Mo., Poplar Bluff—Missouri Oil Co., capital $225,000, incorporated by H. E. Springer of Smackover, Ark.; W. H. Meredith, P. N. Hunter both of El Dorado, Ark.

Okla., Ardmore—Sante Fe Oil & Refining Co. let contract to Universal Oil Products Co. for construction at local plant of 4 units of Dubbs process stills; work on 2 to begin at once; cost approximately $300,000.

Okla., DeNoya—Garfield Petroleum Corp., capital $50,000, chartered by J. M. Weir, E. M. Panner, R. T. Bacon.

Okla., Okemah—Okemah Gas & Electric Co., capital $50,000, incorporated by S. T. Palmer, T. E. Standley, Merle Farrow Henry.

Tex., Cisco—Big Five Oil Co., capital $10,000, incorporated by Abe Ratbatt, M. Polsky, J. Nedier.

Tex., Corsicana—Levalma Petroleum Co., capital $50,000, incorporated by R. L. Wheelock, J. L. Collins, W. T. Church.

Tex., Kelly Field—N. A. Saigh Co., San Antonio, Tex. is lowest bidder at $7895 for installing natural gas distributing system at Kelly Field.

Tex., Lockhart—Joliet Oil Co., capital $12,000, incorporated by J. T. Gillett, L. H. Marshburn, O. L. Swearingen.

Tex., Luling—The United North and South Oil Co. has site and will erect refinery.

Tex., Mineral Wells — Rochelle Oil Corp., capital $80,000, incorporated by O. R. Rochelle, Sidney Webb, W. C. Forbess.

Tex., South Bend—Century Oil & Refining Co., capital $150,000, incorporated by R. G. Pearson, L. Z. Grace, T. B. Wenninghan.


# Valuable Assistance to Your Sales Organization

**Every business day in the year we publish a**

# DAILY BULLETIN

giving dependable and prompt information of industrial undertakings, important building and construction operations and State, County and municipal improvements in the entire South and Southwest. If you sell Machinery and Supplies, Railroad or Contractors' Equipment or are an Architect, Contractor or Builder this inexpensive daily news service would prove invaluable to you.

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MANUFACTURERS RECORD BALTIMORE, MD.

## Ice and Cold-Storage Plants.

Tex., Elgin—Elgin Ice & Cold Storage Co., capital $20,000, incorporated by A. J. Zilker, W. L. Ayers, R. P. Thompson; will take over plant of Elgin Light & Power Co., will improve, install machinery.

Tex., Fort Worth—Diamond Ice and Cold Storage Co. increased capital from $40,000 to $48,000.

## Land Developments.

D. C., Washington—James Martin Realty Co., capital $100,000, incorporated by James Martin, W. C. Smallwood and others.

Fla., Daytona Beach—Ormond Beach Park Co., capital $60,000, incorporated with J. P. Esch, Pres.; John F. Milligan, Sec.-Treas.

Fla., Fort Myers—Pine Island Operating Assn., incorporated with H. Malcolm Hubbard, Pres.; L. F. Goodale, Sec.-Treas.

Fla., Palatka—Seldon Cypress Door Co., capital $150,000, incorporatted with F. H. Wilson, Pres.; H. L. Gerner, Sec.

Fla., St. Petersburg—Northrup Co., capital $100,000, incorporated with T. J. Northrup, Pres.; R. T. Northrup, Sec.-Treas.

Fla., Tampa—Exchange Realty Co., capital $40,000, incorporated with H. O. Pemberton, Pres.; G. E. Mabroy, Sec.-Treas.

Fla., Tavares—Harry B. Jamison of Greenburg, Pa., acquired 20 acres citrus land on Lake Umatilla and will develop.

Fla., West Palm Beach—Seaboard Realty Co., capital $50,000, incorporated with B. W. Mitchell, Pres.; Peter F. Ledkuecher, Sec.-Treas.

Ga., Augusta—Beane Brothers, Inc., capital $50,000, chartered by Frank E. Beale, Jr., Wm. S. R. Beane and others.

Md., Baltimore—City Co. Realty Co., John J. Hurst, has acquired 750 acres on Bush River.

Md., Catonsville—A. J. Watkins, Maryland Trust Bldg., Baltimore, Md., is developing Ridgewood, tract of 45 acres on Wilkens and Leeds Aves.; has concrete sidewalks and roads under construction; will install gas, water and electric systems.

Miss., Laurel — Laurel Chamber of Commerce interested in organization of stock company to develop 1500 acres of wild land, divided into 25 farms averaging 60 acres, each farm to have 4 room residence, barn and poultry house, water well, roads and other improvements.

Miss., McComb—McComb Coffee Co., incorporated by W. L. and M. A. McCullough, L. E. Steinmetz.

Mo., Kansas City — Sharon Development Co., capital $15,000, incorporated by F. C. Sharon, C. F. Curry, R. Tillotson.

Mo., Kansas City—E. L. Winn, Pres. and Gen. Mgr. of E. L. Winn Construction Co., has acquired 23 acres on north side of Eighty-fifth St. and will develop for home sites; will construct roads and streets, etc., and erect about 40 homes.

Mo., St. Louis—St. Louis Realty Co., incorporated by Everett Davis, Carl Watkins, W. G. Vornbrock.

N. C., Asheville—Log Tavern Development Co., capital $50,000, incorporated by J. G. Baker, W. K. Lyerly, J. W. Brown.

N. C., Kannapolis — Saunders-Henningan Co., capital $25,000, incorporated by E. L. Saunders, S. A. Henningan and others.

N. C., Raleigh—Dortch and Hines, Inc., capital $100,000, incorporated by N. C. Hines, Gavin H. Dortch and others.

S. C., Spartanburg—Details under Road and Street Construction.

S. C., Walterboro—Walterboro Realty Co., incorporated with J. N. Frank, Pres.; A. H. Wichman, V. P.

Tenn., Knoxville—Lincoln Cemetery Co., Fouche Bldg., capital $20.000, incorporated by Albert K. Stewart, J. T. Machamer and others; has purchased and will develop 75 acres for cemetery.

Tex., Dallas—C. S. Mitchell and associates interested in development of Kessler Park a tract of 125 acres for subdivision; Koch & Fowler, Engrs.

Tex., Houston—O. C. Wright will develop 1600 acres near Clear Lake for subdivision; will install water, sewer, electric lights, telephone system, construct streets, etc.

Tex., Houston—Wells Realty & Investment Co., capital $50,000, incorporated by Damon Wells, J. M. Wells and others.

Tex., Lubbock—Commrs. of Lubbock County will establish tourist park at Lubbock County Recreational Park; will erect building for hot and cold showers, laundry, kitchen, etc.; construct roadways, artificial lake, etc.

Tex., San Antonio—Nedlake Development Co., capital $200,000, incorporated by W. L. Williams, O. M. Sewell, H. C. King, Jr.

Va., Franklin—Real Estate Joinstock Co., capital $25,000, incorporated with A. W. Johnston, Pres.; James C. Morris, Sec.

Va., Norfolk — New Home Corp., capital $20,000, chartered with H. L. Lowry, Pres.; J. Carlton Hudson, Sec.

Va., Norfolk—United Owners Realty Corp., increased capital from $600,000 to $800,000.

Va., Norfolk—Sawyer Development Corp., capital $50,000, chartered with C. M. Sawyer, Pres.; Wm. W. Old, Jr., Sec.

## Lumber Enterprises

Ala., Stockton—Ward Brothers, of Bay Minette, Ala. have acquired sawmill and equipment of J. C. McDavid, will operate.

Ark., Marion County—George Markle, of Springfield, Mo., acquired 440 acre tract of timber land, will establish sawmill.

Fla., Kelsey City—Chas Fagg, West Palm Beach, Fla., will erect plant for production of mill work supplies.

Fla., Bayou George—Bayou George Lumber Co., incorporated with O. B. Hobbs, Pres.; F. A. Black, Sec.-Treas.

Ga., Sylvania—Mose and Henry Perkins have acquired the A. S. Mills Lumber Co.'s plant, including planing and grist mill, ginnery and timber interests, will improve and operate.

La., Lake Charles—Texas Oil Co. has acquired the hardwood mill and portion of timber holdings of J. C. Nickerson, of Lafayette, La.

N. C., Beulaville—D. C. Johnson will erect lumber plant, cost $45,000.

N. C., Durham—West Durham Lumber Co., capital $50,000, incorporated by O. D. Barber, R. B. Mason and others.

S. C., Drake—C. S. Whipple, Inc., capital $2,000,000, incorporated with Charles S. Whipple, Pres.; L. G. Masters, Sec.-Treas

Tex., Corrigan—Edens-Birch Lumber Co., (lately noted incorporated, capital $40,000), organized with W. F. Edens, Pres.; J. L. Birch, Sec.-Treas.; has 30x100-ft. mill, 28x90-ft. planer and 22x44-ft. kiln, all ready to operate; daily output 25,000 ft. pine and hardwood lumber.

## Metal-Working Plants.

Okla., Tulsa—Stephens Sheet Metal Works, capital $12,000, incorporated by Frank S. Stephens, Sr., Effie Stephens and others.

## Mining.

Fla., Ocala—Marion County Lime Co., capital $100,000, incorporated with E. F. Fitch, Pres.; Jack Camp, Sec.-Treas.

Ky., Winchester — Scobee Limestone Co., capital $20,000, incorporated by J. A. and R. B. Scobee, W. C. Taylor.

Missouri—Zinc—Federal Mining & Smelting Co., F. H. Brownell, Pres., general office 120 Broadway, New York City, has acquired lease on 700 acre tract land located on Spring river between Galena and Peacock, will develop; P. W. George, Gen. Supt.

N. C., Haynesville—North Carolina Clay Co., increased capital from $75,000 to $250,000 and changed name from Titanic Ore Co.

Okla., Hockerville—R. B. Jensin, of Baxter Springs, Kansas, will rebuild Indiana Mill, burned at loss of $75,000.

Okla., Miami—H. and M. Mining Co., capital $150,000, incorporated by Alfred Hare, H. L. Stuart, of Oklahoma City, Okla.

Tex., Waco—Texas Gravel Co., capital $25,000, incorporated by T. J. Palm, L. D. Eastland, and others.

## Miscellaneous Construction.

Fla., Fort Pierce—Inlet—Town voted $220,000 bonds for inlet improvements, harbor work, etc.; work will begin about Aug. 1; Miller Hallowes, Engr. (Lately noted.)

Fla., Jacksonville—Bulkhead — Merchants & Miners Transportation Co., main office 112 S. Gay St., Baltimore. Md., let contract to Charles E. Hillyer, Jacksonville, for steel pile bulkhead. (Lately noted.)

Fla., Miami—Canal, etc.—Bakers Haulover Comn., J. C. Baile, Chmn., Box 443, will construct one 200x1600 ft. canal, stone and steel construction, estimated cost $275,000; bids open within 60 days; work for the improvement of waters of Biscayne Bay.

Fla., St. Petersburg—Incinerator—Details under Road and Street Construction.

La., Belle Chasse—Terminals, etc.—United Fruit Co., Crawford H. Ellis, V. P., New Orleans, La., reported to have acquired 8000 acre tract, will construct wharf and terminals for its merchandise business.

N. C., Asheville—Government will survey the French Broad River basin with view to deciding the feasibility of building a lake covering 26,000 acres, that would touch Asheville, Henderson and Brevard furnishing unlimited hydro-electric power possibilities; estimated cost of survey from $30,000 to $40,000, work under supervision of Major Harold C. Fiske; should plans meet with success, project would be completed within three years.

S. C., Spartanburg—Fire Fighting Equipment—Details under Road and Street Construction.

S. C., Spartansburg—Swimming Pool—City has tentative plans for the construction of 100x200-ft. swimming pool in Cleveland park, concrete walls and floor; P. J. O. Smith, City Supt. of Streets.

Tex., Rockport—Breakwater—City let contract to D. M. Picton & Co., at $50,000 to construct rock breakwater; Fred M. Percival, Engr., S. F. Jackson, Mayor.

Tex., Ballinger—Details under Drainage & Irrigation.

Tex., Fort Worth—K. Robey, Engr. and Chmn. of the local flood control Committee interested in constructing several lakes in Fort Worth watershed as flood prevention and water conservation method; also plans forming Tarrant County district to vote bonds for the establishing of the lakes; Government engineers will make surveys of proposed lake sites in the county.

Tex., Texas City—Bulkhead, etc.—Texas Sugar Refining Co., Paul Fager, Supt., will construct 2000 ft. of timber bulkhead, 400 ft. concrete and timber wharf, 300,000 cu. yds. dredging; bidders are Wm. Moore & Sons, and John Jacobson, both Texas City.

## Miscellaneous Enterprises.

Ala., Bessemer—Bessemer Laundry Co., J. E. Tumlinson, Mgr., will erect addition to plant at First Ave. and 21st St.

Ala., Birmingham—Doris Manufacturing Co., Inc., capital $10,000, incorporated with M. Fein, Pres.; I. Epstein, Sec.-Treas.

Ala., Montgomery—Brown Printing Co. increased capital from $9000 to $100,000.

Ala., Moulton—North Alabama Publishing Co., Inc., organized with W. C. Bragg, Pres.; S. E. Rudd, Mgr.; has acquired plant and will publish weekly newspaper. (Lately noted incorporated.)

Ark., Fort Smith—Fort Smith Cereal Co., capital $100,000, organized with J. R. Miller, Pres.; C. A. Birdsall, Sec.-Gen. Mgr.; will manufacture The Dixie Maid product, etc.

D. C., Washington—Physical Corrector Co., capital $400,000, incorporated by Noah R. Robinson, Charles E. Willard and others.

Fla., Daytona — Engineering — Johns A. Rogers Co., capital $25,000, incorporated with John A. Rogers, Pres.; M. Vernon Moore, Sec.

Fla., Davenport—Holly Hill Inn, Inc., capital $100,000, incorporated with Lorenzo A. Wilson, Pres.; Bayless W. Haynes, Sec.-Treas.

Fla., Gainesville—Florida Advertising Co., capital $25,000, incorporated with S. L. Carter, Sec.

Fla., Groveland—Groveland Publishing Co., capital $10,000, incorporated with A. W. Newett, Pres.; Ruth Newett, Sec.

Fla., Jacksonville—Reid Brothers Fireproof Warehouse Co., capital $50,000, incorporated with Wm. R. Reid, Pres.; B. J. Reid, Sec.-Treas.

Fla., Miami—Contracting—T. B. McGahey Paving Co., capital $100,000, incorporated with T. B. McGahey, Pres.-Treas.; Walter Vanlandingham, Sec.

Fla., St. Petersburg—American Woodmen Stock Co., capital $10,000, incorporated with G. W. McCray, Pres.; Hattie Wideman, Sec.-Treas.

Fla., Pensacola — Rest-Well Medicine Co., Inc., Jas. R. Polkinghorne, Pres.-Mgr., 509 W. Belmont St., will erect 2 story brick building, cost approximately $15.000, will call for bids in Fall; install bottle filling machine producing 25 gross. Lately noted. (See Machinery Wanted—Filling (Drug) Machine.)

Fla., West Palm Beach—Radio Blaze Spark-Plug Co., capital $20,000, incorporated with Otto Charles Weinstock, Pres.; John H. Williams, Sec.-Treas.

Ga., Fitzgerald—E. L. Dorminey, Mgr., of the Fitzgerald Ice Co., and others interested in establishing creamery.

Ga., Macon—Central Bedding Co., Inc., 425 Archt St. (lately noted incorporated, capital $15,000) organized with A. I. Blum, Pres.-Mgr.; organization not completed.

Ga., Waycross—John H. King, of the King Brothers Motor Co., and others interested in the establishment of creamery plant.

Ky., Louisville—Standard Sanitary Manufacturing Co., let contract to Platoff & Bush, to erect two buildings at 7th and Shipp Sts., one building 150 ft. square for foundry purposes, and one 57x80 ft. for enameling process, cost $100,000; D. X. Murphy & Bro., Archts.

Ky., Louisville—Stiglitz Furnace Co., capital $25,000, incorporated by L. D. and E. N. Stiglitz and others.

Ky., Louisville—Paramount Printing Co., incorporated by Ivan V. Cleaver, G. M. Klaus, Gilbert Kessler.

La., Bastrop—Bastrop Glass Co. organized to take over the $250,000 plant of the Ouachita Valley Glass Co., will operate.

La., Monroe—H. L. Brown Paper Co., H. L. Brown, Pres., let contract to Morton C. Tuttle Co., Converse Bldg., 101 Milk St., Boston, Mass., to erect 50-ton Kraft paper mill, of Southern yellow pine construction; will use natural gas to produce steam; George F. Hardy, Engr., New York City. (Lately noted.)

La., New Orleans—Katz & Bestoff. Ltd., increased capital from $50,000 to $250,000.

La., New Orleans—Charles A. Kauffman. Ltd. increased capital from $150,000 to $300,000.

Miss., Biloxi—Fire Fighting Equipment—City Commrs. let contract to The American LaFrance Fire Engine Co., Atlanta, Ga., at $12,500 for an automatic pumper for fire department

Miss., Biloxi—Buena Vista Hotel Co., capital $150,000, incorporated by J. W. Apperson, R. H. Holmes and others.

Miss., Jackson—Magnolia Ice Cream Co., Walter M. Wright, Mgr., will install additional equipment.

Miss., Vicksburg——Electrolock Manufacturing Co., W. Hemingway, r., Pres., let contract for the manufacture of special dies and tools for making all steel parts for "Electrolocks" used on automobiles for fire protection.

Mo., Kansas City—Sarazen Electrical Distributing Co., capital $25,000, incorporated by Geo. Taylor, L. L. Freund, H. A. Loevy.

Mo., Maplewood—Millway Plumbers, Inc., incorporated by C. Hohe, Raymond Millaway and others.

Mo., St. Joseph—Carsinol Research Laboratories, Inc., capital $50,000, incorporated by B. C. Sher, J. L. Weiner, and others.

Mo., St. Joseph—Giant Dipper Co., capital $60,000, incorporated by L. F. Ingersoll, Basil Kaufman and others.

Mo., St. Joseph—Werner Shoe Co., capital $15,000, incorporated by C. A. Brand, F. W. Werner, and others.

Mo., St. Louis—Victory Bag & Paper Co., capital $11,000, incorporated by Julian Olds, John Dietrich, and others.

Mo., St. Louis—McAnulty Co., capital $10,000, incorporated by J. T. McAnulty, H. F. Klein, J. R. Clairborne; will manufacture building material.

Mo., Springfield—Springfield Packing Co., W. E. Banks, Pres. is having plans prepared for packing plant.

N. C., Asheville—J. A. Baker Packing Co., (temporary office Jenkins Hotel Bldg.) Dr. H. C. Bruner, Sec., Louisville, Ky., will construct plant on Riverside Drive; cost $250,000.

N. C., Charlotte—Wadsworth & Sehorn Co., capital $500,000, incorporated by Geo. P. Wadsworth and S. E. Sehorn, both Charlotte; J. F. Cannon, Concord, N. C.

N. C., Fayetteville—North State Light & Heating Co., capital $25.000, incorporated by J. C. Wiggs, W. C. Bartlett, G. C. Price.

N. C., Greensboro—Southland Film Co., Inc., chartered with W. Tom May Van Plancke, Pres.; B. S. Culver, Gen. Mgr.

N. C., Hamlet—Carolina Construction Co., capital $25,000, incorporated by R. H. Hallyburton, C. W. Owens, J. C. Lackey.

N. C., Hamlet—Hamlet Warehouse Co., capital $50,000, incorporated by J. P. Gibbons, W. R. Land, Nathan LeGrand.

N. C., Raleigh—Raleigh Printing Co., 420 S. Salisbury St., Eustice B. Norfleet, Mgr., Wilmington, N. C.; will erect printing plant; 40x100 ft.; fireproof; mill construction; cost $25,000; Linthicum & Linthicum, Archts., Raleigh; J. B. Crews, Contr., Wilmington, N. C.; construction begun. (Lately noted.)

N. C., Raleigh—C. H. Fleming Drug Co., capital $50,000, incorporated by C. H. Fleming, R. G. Carter, D. H. Powell.

Okla., Bartlesville—Puckett Pharmaceutical Co., incorporated by W. A. Lynott, M. R. Puckett, M. E. Michaelson.

Okla., Hugo—Electric Foot Stool Corp., capital $200,000, chartered by Smith Luten, A. T. Wight, C. L. Yates.

Okla., Oklahoma City—National Radio Mfg. Co., 225 W. 2nd St., Dudley Shaw, Pres. has plant and will install small lathe drill, circular saw, emery and polishing wheel all direct connected; electric motors 110 volt, 60 cycle, single phase. (Lately noted.)

Okla., Oklahoma City—Conrad & Waterhouse, incorporated by Harold J. Conrad, Charles M. Waterhouse, Ennis M. Terry.

Okla., Oklahoma City—Phonograph Co., capital $25,000, incorporated by A. C. Dennis, R. H. Sherman, W. J. Davidson.

Okla., Stillwater—Advance-Democrat Publishing Co., capital $10,000, incorporated by M. F. Otey, Jess Hoke and others.

Okla., Tulsa—Bradbyer-Dunntile Manufacturing Co., capital $65,000, incorporated by Wyron West Bradbyer, L. J. Campbell, Edmund Lashley.

Okla., Wynona—P. R. Williams Oil Co., capital $100,000, incorporated by H. H. Brenner, Pawhuska, Okla.; W. E. Browning and Ernest McCarty of Wynona.

S. C., Florence—W. V. Parrott Co., incorporated with W. V. Parrott, Pres.; W. J. Parrott, V. P.

S. C., Greenville—Steel Heddle Mfg. Co., 21st and Allegheny Ave., Phila., Pa., Robt. J. Freitag, Treas. let contract to J. E. Sirrine & Co., Engrs. Greenville, S. C. for construction of plant to manufacture pitch band loom reeds and also possibly for assembling loom harness now being manufactured at plant in Phila.; structure will be 2 stories; concrete; 125x60 ft., cost approximately $50,000, including land; the plant of F. & B. Suter at High Point, N. C., has been purchased and equipment will be transferred to Greenville upon completion of building; Hampton Smith, Mgr. (Lately noted.)

S. C., Orangeburg—Chero-Cola Bottling Co., capital $20,000, incorporated with H. A. Lowman, Pres.; E. C. Lowman, Sec.

Tenn., Chattanooga—Duff Drug Co., incorporated by T. O. Duff, A. L. Healan and others.

Tenn., Chattanooga—Gus H. Miller and Blackwell Smith interested in manufacture of Miami Lamp, invented by William A. Brown of Miami, Fla., which is a combination light, heater and fan; at present time will use portion of Miller Bldg., for assembling and distributing, later will probably manufacture lamp in Chattanooga.

Tenn., Chattanooga—L. E. Gwinn acquired plant of DeCamp Glass Casket Co.

Tenn., Knoxville—Beaver Power & Milling Co., capital $20,000, incorporated by H. H. Hendricx, R. G. Garrison, B. H. Kelly.

Tenn., Memphis—Memphis Linotype Printing Co., 56 N. Third St., Dan Wolf, Pres., let contract to Wm. Hanker, for erection of printing plant; 100x100 ft.; 2 stories and basement; mill construction; Hanker &

Cairns, Archt., Madison Ave. Bldg., Memphis, Tenn. (Lately noted.)

Tex., Fort Worth — Lampe-Thomas Co., capital $100,000, incorporated by H. C. Bampe, Dave Thomas, Robert Harris.

Tex., Galveston—W. A. Kelso & Co., capital $10,000, incorporated by W. A. Kelso, R. M. Sims, W. E. Doyle.

Tex., Hemphill—H. Pratt & Sons Co., increased capital from $25,000 to $30,000.

Tex., Houston—Andrews and Bryant Co., capital $10,000, incorporated by M. E. Andrews, J. G. Bryant, G. W. Schmitz.

Tex., Houston—Garrow-Kehoe Inc., chartered by H. W. Garrow, Sr., H. W. Garrow, Jr., T. R. Kehoe.

Tex., Houston—Crystal Salt Co., capital $150,000, incorporated by E. G. Potter, C. W. Barber, C. S. Karoll.

Tex., Lubbock—Avalanche Publishing Co., J. E. Henderson, Sec., let contract to Geo. W. Pickle, to rebuild burned plant; 52x125 ft.; fireproof; cost of building $16,000; cost of machinery, $36,000; contract let. (Lately noted.)

Tex., Orange—Markwith & Holcomb Mfg. Co., J. C. Markwith, Pres. will erect building on Eighteenth St. near Main St.

Tex., San Antonio—San Antonio Beverage Syrup Co., capital $100,000, incorporated by D. A. Castleberry, R. J. Woellert.

Tex., Sweetwater—United States Gypsum Co. of Chicago, Ill., reported to erect gypsum plant.

Tex., Taft—Cage Hardware & Furniture Co., capital $30,000, incorporated by J. B. Cage, W. A. Williams, W. C. Sparks.

Tex., Texas City—Details under Miscellaneous Construction.

Va., Buchanan—Buchanan Supply Co., capital $15,000, incorporated with L. M. Rodeninser, Pres.; E. J. McCulloch, Sec.; will manufacture building supplies.

Va., Danville—Waddill Printing Co., capital $125,000, incorporated with H. F. Day, Pres.; S. C. Cunningham, Sec.

Va., Lynchburg—Patent Pocket Corp., chartered with A. C. Barrow, Sec.

Va., Richmond—Cook Printing Co., capital $25,000, incorporated with E. V. Cook, Pres.; Mrs. E. V. Cook, Sec.

Va., Richmond — Pepsi-Cola Corp., capital $250,000, chartered with R. C. Megargel, Pres.; T. Gray Hadden, Sec.

Va., Richmond—Richmond Skirt Manufacturing Co., Inc., will reorganize with Joseph Hodes, Pres.; will manufacture wearing apparel.

Va., Roanoke—Roanoke Highway Improvement Corp., capital $200,000, chartered with C. R. Williams, Pres.; B. F. Moomaw, Sec.

Va., Roanoke—Van Lear Drug Co., capital $45,000, incorporated with W. B. Van Lear, Pres.; Geo. A. Van Lear, Sec.

W. Va., Beckley—Raleigh County Construction Co., capital $100,000, incorporated by C. M. Lilly, O. C. Young, G. H. Moss.

W. Va., Clarksburg—Clarksburg Heating Co., capital $10,000, incorporated by J. W. Duckworth, Fairmont, W. Va.; James and M. H. Laulis, Enterprise.

W. Va., Fairmont—James H. Barrett will erect laundry on Virginia Ave.; main building 40x90 ft.; boiler room 30x20 ft.

W. Va., Mannington—Mountain State Glass Co., capital $100,000, incorporated by Howard D. Atha, Chester L. Prichard, Roy F. Alder.

W. Va., Welch—Jones-Cornett Electric Co., capital $25,000, incorporated by Paul W. Jones, P. L. Cornett, I. J. Rhodes.

## Motor Cars, Garages, Tires, Etc.

Ala., Birmingham—Garage—Berger Phillips will erect brick garage building at 714 N. 19th St., cost $25,000.

Ark., Camden—Garage—O. B. Burns let contract to H. G. Burnham, of Pine Bluff, Ark., to erect 2-story, 50x110-ft. building at corner Adams and Jackson Sts., brick and steel construction, approximate cost $30,000; establish drive-in filling station, display rooms and repair shop, install elevator as second floor will be for storage of cars; Mitchell Seligman, Archt., Pine Bluff, Ark.

Fla., Orlando—Garage—I. W. Phillips & Sons let contract to Mr. Townsend to erect 6-story garage building at corner Orange and Jackson Sts., hollow tile and stucco construction.

Ga., Savannah—Filling Stations—Texas Oil Co. contemplates erecting five new filling stations in various sections city to cost approximately $100,000; J. E. Adams, local agent of Sales Dept.

Ky., Ashland—Filling Station—Captain Jack Waugh contracted with the Indian Refining Co. to erect filling station corner Winchester Ave. and 25th St.; Mr. Waugh will erect station according to specifications furnished by the company.

Ky., Middlesboro—Garage—Motch Motor Co., will erect 2 story, 50x180 ft. building, steel girders, steel joist and concrete floors, composition roofing; construction by owner; install 8x18 one story lift for automobiles; Manley & Young, Archts., Knoxville, Tenn.

La., Sulphur—Huber Motor Co. will erect one story brick garage and sales room building, cost $10,000.

Md., Baltimore—Sun Oil Co., general office Philadelphia, Pa., will erect 1-story brick filling station corner Preston and Guilford Ave.; cost $10,000.

Miss., Biloxi—Edwards Motor Sales Co., capital $10,000, incorporated by E. W. and J. K. Edwards and others.

Miss., McComb—Enochs Chevrolet Co., capital $100,000, incorporated by F. B. and T. E. Enochs and others.

Mo., Kansas City—Keyless Auto Lock Co., incorporated by H. F. Landeck, W. O. Wideener, C. B. Haycox.

Mo., Kansas City—Fold-O-Lock Sterling Wheel Mfg. Corp., capital $50,000, incorporated by C. A. Hagbert, F. L. Fraser, C. L. Winberg.

N. C., Charlotte—Kiser Auto Exchange Co., capital $100,000, incorporated by H. B. Kiser, Charles Blackburn, W. R. Foreman.

N. C., Durham—Bryant Motor Co., capital $100,000, incorporated by Jones Fuller, F. L. Fuller, Jr., and Isabel Cecil.

N. C., Wilmington—McMillan Garage Co., capital $100,000, incorporated by W. D. McMillan and Louis D. McMillan.

Okla., Drumright—Garage—James Bennett contract to Klinglesmith Engineering Co. of Drumright to erect brick garage and display room.

S. C., Charleston—Jacobs-Overland Co., 145 Calhoun St., plans increasing capital to $20,000.

S. C., Columbia—Evans Motor Co., Inc., capital $10,000, chartered with W. E. Evans, Pres.; J. M. Evans, Sec.

S. C., Gaffney—Garage—J. D. Goudelock let contract for the erection of 1-story, 80x66-ft. building on E. Robinson St. containing three rooms, one of which is leased by S. C. Ledford.

S. C., Lancaster—Craig Motor Co., capital $10,000, incorporated with J. E. Craig, Pres.; E. D. Craig, V. P.

S. C., Sumter—Sumter Buick Co. increased capital from $5000 to $15,000.

Tenn., Harriman—Garage—John A. East, of Rockwood, Tenn. let contract to J. Coleman, Rockwood, at $40,000, to erect 2 story, 100x100-ft. building brick, steel girders and mill construction; composition roofing; concrete ramps; Manley & Young, Archts., Knoxville, Tenn.

W. Va., Amherstdale—Triadelphia Motors Corp., H. H. Smith, has under construction one 26x40-ft. and one 16x30-ft. galvanized iron buildings; will install garage equipment, oil and gas pumps, latter of which is purchased; A. J. Hopkins, Archt., Braeholm, W. Va. Lately noted. (See Machinery Wanted—Garage Equipment.)

## Railways.

Ala., Birmingham — Special Dispatch to Manufacturers Record says Tennessee Coal, Iron & Railroad Co. announce standard gauge railroad 5 miles long and all of it elevated will be built at once from Red Mountain ore mines to Fairfield and Ensley for fast conveyance of ore. Cost about $4,000,000. George Gordon Crawford is president.

Fla., Fort Myers—Fort Myers Southern Railroad Co. proposes to build extension of Atlantic Coast line from Fort Myers via Bonita Springs to Marco, Fla., about 45 mi. J. E. Willoughby, Ch. Engr., Atlantic Coast Line, Wilmington, N. C., may give information.

## Railway Shops, Terminals, Roundhouses, Etc.

Fla., Lakeland—Atlantic Coastline R. R. Co., J. E. Willoughby, Chief Engr., Wilmington, N. C., let contract to T. E. Amason of Thomasville, Ga., to erect 5 stall engine house and machine shop additions, 62x107-ft.; install 200 ton locomotive hoist and 70-in. wheel lathe, contracts have been placed.

Ky., Central City—Illinois Central R. R. Co., F. L. Thompson, Ch. Engr., Chicago, Ill. let general contract to Joseph E. Nelson & Sons, 3240 S. Michigan Ave., Chicago, to erect 125 ft. roundhouse, 12 stalls, brick and timber; 10 ft. turntable, through type, pit concrete, table steel; 1 story, 42x148 ft. machine shop and power house, brick and steel; 1 story, 29x42 ft. blacksmith shop, brick and steel; 1 story, 18x38 ft. shopman's wash, locker and toilet building, brick and timber; 31x71 ft. oil and storage house, brick and timber; 1 story, 16x24 material storage shed, frame; 1 story, 15x35 ft. engineer's tool and equipment building, frame; 1 story 10x12 ft. shelter for cinder pit men, frame; 1 story, frame 10x84 ft. wet sand bin; 1 story brick and timber, 9x20 ft. sand dying house; 1 story frame, 25x40 ft. blacksmith shop; 1 story frame 25x65 ft. waste vat, paint, wash and locker building; 1 story frame 25x270 ft. lumber shed and carpenter shop, office and store room; 1 story frame, 21x35 ft. boiler room and coal bin; 150 ft. concrete stack; cost $370,000, contract for plumbing let to Federal Engineering Co., 3240 S. Michigan Ave., and for heating to Kelm Bros. Co., 13 W. Kinsey St. both Chicago; contract for a stack to John B. Boland, St. Louis, Mo.

Tex., Temple—Southwestern Traction Co., will erect 75x150-ft. repair shop, car shed and offices; brick construction; W. G. Haag, Engr. in charge.

## Road and Street Construction.

Alabama — State Highway Dept., Montgomery, Ala., let contracts to grade, etc., 3 roads as follows: St. Clair County, concrete road between Birmingham and Gadsden, Sec. A, 16.286 mi. to Phillips & Co., Birmingham, at $175,570.17; Sec. B, 15.717 mi., to Donahue & Co., Tuscaloosa, at $177,490.48; for 5 culverts and bridges, to W. C. Howton Contracting Co., Oneonta, Ala., at $49,196.01; Crenshaw County, 12.647 mi. gravel from Brantley to Covington County line, to Fountain & Myers, Hattiesburg, Miss., at $154,234.74; W. S. Keller, State Highway Engrs. (Lately noted.)

Ala., Alabama City—City will receive bids until July 24 to pave Forest Ave., and 7th St.; estimated cost $80,000. Address Walter Thompson, City Atty.

Ala., Birmingham—City let contract to H. N. Bowdry, Birmingham, at $53,339 to pave 5th Ave. from 39th to 45th Sts., and to Birmingham Ry., Light & Power Co., at $13,390 to pave between rails, and for 18 in. on each side of tracks. (Lately noted.)

Ala., Dora—Town will receive bids until July 24 to grade, pave and lay curbs and gutters on certain streets; asphaltic concrete, emulsified asphaltic concrete, and concrete paving; concrete curb, and combined curb and gutter under Improvement Ord. No. 1; plans, etc., on file; Chas. H. Fanning, Clk.

Ala., Tuscaloosa—Tuscaloosa County plans building 4 mi. Hagler road, from Samantha on Byler road, to Philadelphia Church on Waldrep road. Address Board of Revenue.

Ark., Camden—City plans paving California St., from Missouri Pacific Crossing to Galyon's store; Jefferson from California to Harrison; Harrison from Jefferson to Jackson; Jackson from California to Adams, in Dist. No. 4; W. Washington from Missouri Pacific Crossing to Hamilton; Hamilton from Washington to Lyons Lane; Lyons Lane, from Hamilton to Agee; Agee from Washington to McCollough, McCollough from Agee to Cleveland Ave., in Dist. No. 5. Address The Mayor.

Fla., Bunnell—Flagler and Volusia Counties plan building Ocean Shore Blvd. from Flagler County to point some distance from lighthouse in Volusia County; will vote July 10 on $450,000 bonds. Address County Commrs.

Fla., Daytona Beach—City and Seabreeze, Fla., let contract to M. G. Long, at $15,000, to pave Auditorium Blvd., from Halifax to Ocean Ave., being dividing line between these cities .Address Guy G. Bailey, Mayor of Daytona.

Fla., Daytona Beach—City let contract to Geo. W. James, at 22 cents sq. ft. to pave portion of Grandview and Vermont Aves. Address Guy G. Bailey, Mayor.

Fla., Miami Beach—City let contracts to John J. Quinn Co., Miami, at $132,004, for street paving, and to L. L. and D. F. DeVane at $3575 for sidewalk between 5th St. and Biscayne Ave. (Lately noted.)

Fla., Panama City—City plans expending $333,333 for street improvements. Address The Mayor.

Fla., St. Petersburg—City plans expending $2,612,000 for improvements, including following: Street paving, $1,500,000; bridges, $79,000; incinerator, $90,000; storm drainage, $463,000; sanitary sewers, north of 9th Ave., in downtown dist., and high school dist., $305,000; other improvements, $175,000. Address Director of Public Works.

Ga., Albany—State Highway Dept., Atlanta, Ga., receives bids until July 6 for section of Dixie Highway from end of paving on Blue Springs road to Mitchell County line.

Ga., Atlanta—City receives bids until July 6 to pave with concrete Carnegie Way and James St. from Spring to Cain and Cain from Spring to Bartow; also with smooth pavement Wesley Ave. from Peachtree road to Brookwood Drive; plans, etc., from C. M. Holland, Pur. Agt.

Ga., Camilla—Mitchell County plans rebuilding road from Camilla to Colquitt County line; estimated cost $80,000. Address County Commrs.

Ga., Columbus—Central of Georgia Ry. Co., let contract to C. G. Kershaw Contracting Co., Birmingham, Ala., at $109,000 for 11th St. underpass. (Lately noted.)

Ga., Waycross—State Highway Dept., East Point, Ga., will receive bids until July 6 for 7.064 mi. penetration macadam road on Waycross-Folkston road, Ware County, Federal Aid Proj. No. 114; plans, etc., from W. R. Neel, State Highway Engr., East Point, and C. L. Rhodes, Div. Engr., Waycross, Ga.

Ky., Central City—Hornaday Construction Co., 1261 Central Ave., Memphis, Tenn., was awarded contract at $189,500, for 30,500 lin. ft. concrete curb and gutter, and 49.500 sq. yds. rock asphalt pavement on stone macadam base.

Ky., Louisville—Details under Bridges, Culverts, Viaducts.

La., Baton Rouge—Yazoo & Mississippi Valley R. R. Co., plans expending about $100,000, for hard surface paving and drainage on Front and Natchez Sts., between their property and west of Louisiana Ry. & Navigation Co. tracks; M. B. Morgan, Dist. Engr., Memphis, Tenn.

La., Mansfield—DeSoto Parish plans completing from 100 to 200 mi. hard surfaced roads; contemplates $1,000,000 bond issue. Address Police Jury.

La., Pointe a la Hatchie—Louisiana Highway Comn., Baton Rouge, let contract to Highways Construction Co., 418 Godchaux Bldg., New Orleans, La., at $8966.61 for 4 sections Pointe a la Hatchie Highway in Plaquemines Parish; combination washed gravel-clam shell surface; Proj. No. 367. (Lately noted.)

Md., Annapolis—City let contract to Ward & O'Connell, New Amsterdam Bldg., Baltimore, to pave following streets: East, Carroll, portion of Clay, Dean, Jefferson, Cathedral and South, and Acton Lane, with concrete; Francis and Randall Sts., with vitrified brick; will lay concrete curbs and gutters on 2nd and 5th Sts., in Spa View section; let contract to Chas. A. Howard, to install sewer in Jefferson St., from West St. to National Soldiers' Cemetery, then down 5th St.; Samuel Jones, Mayor; Emma Abbott Gage, City Clk.

Miss., Laurel—Details under Land Developments.

Miss., Laurel—City will receive bids until July 9 for 3542 sq. yds. concrete sidewalks; 3245 sq. yds. brick paving; 930 sq. yds. concrete paving; 4852 lin. ft. curb and gutter, and 1117 lin. ft. concrete curb; plans, etc., from City Clk.; J. H. Pace, Street Commr.

Mo., Clinton—Town let contract to Hignote & Hall, Clinton, at $10,000 to pave road to Englewood Cemetery. Address Board of Trustees.

Mo., Kahoka—Details under Sewer Construction.

Mo., Kansas City—Details under Land Developments.

Mo., Springfield—City plans grading and paving with asphaltic macadam, Grand St. from Jefferson to Campbell Aves.; C. A. Dickerson, City Clk.; W. E. Freeman, Mayor.

N. C., Belmont—City plans laying 1 mi. cement sidewalks in Imperial Mill village, and 1½-mi. sidewalks in Chronicle village. Address Board of Aldermen.

N. C., Burlington—City let contract to J. Frank Mitchell, Burlington, for 38,000 yds. paving on Daisy, North and W. Park Ave., and Kime St.; also to Burlington Construction Co., to install water mains and sanitary sewers; Earl B. Horner, Mayor. (Lately noted.)

N. C., Charlotte — City plans opening Stonewall St. from College to Brevard; also plans widening 10 ft., 5th from Tryon to Church, and 4ft. 7th from Tryon to Norfolk-Southern Ry. tracks; W. S. Stancill, Commr. of Public Works.

N. C., Charlotte—City contemplates extending W. Morehead St. from Church to Clarkson; Joseph Firth, City Engr.

N. C., Rutherfordton—Town will receive bids until July 10 to pave, lay sidewalks, and construct concrete culverts; plans, etc. from C. F. Greer, Mayor, and Carolina Engineering Co., Engr., Wilmington, N. C.

N. C., Shelby—Town plans surfacing or resurfacing streets with sheet asphalt, bitulithic or bituminous concrete, on solid foundation or concrete, with curbs, gutters and drains; contemplates $35,000 bond issue; Mrs. Oscar M. Suttle, Clk. of Board of Aldermen.

N. C., Troy—City will receive bids until July 17 for 20,000 sq. yds. bituminous pavement; 40,000 sq. yds. gravel surfacing; 8 mi. curb and gutter; 5 mi. concrete sidewalk; plans, etc., from C. C. Broughton, Mayor, or L. V. Edwards, Consit. Engr., Winston-Salem, N. C.

Okla., El Reno—City plans paving Watts St. from Haddon Ave. to Rock Island tracks, estimated cost $14,736; also plans expending $67,200 to pave 3 blocks on Haddon Ave., and 5 blocks on Ellison Ave. Address Mayor Kivett.

Okla., Healdton—City let contract to Dan Blackburn, Healdton, to pave 3 blocks Main St.

Okla., Picher—Chanute Spelter Co., let contract to M. D. Montgomery, Picher, for ½ mi. macadam highway near company's property; will connect Baxter Springs and Chetopa, Kansas, roads out of Picher.

Okla., Stillwater—Payne County plans hard surfacing roads in County; cost $120,000; Geo. Whittenberg, County Engr.

S. C., Anderson—Anderson County will receive bids until July 11 to construct drainage structures and surface 3.867 mi. State Route No. 18, between Abbeville County line and Varennes Church; 11,981 cu. yds. topsoil; also construct 216-ft. reinforced concrete treated timber and structural steel bridge, and double 10x10 ft. reinforced concrete culvert; Federal Aid Proj. No. 150, Sec. B; plans, etc., from E. D. Sloan, Jr., Div. Engr., Greenville, S. C., and from State Highway Engr., Columbia, S. C.

S. C., Camden—City plans paving and laying sidewalks on 6¼ mi. streets; contemplates voting on $85,000 bonds. Address The Mayor.

S. C., Cheraw—City plans paving streets and sidewalks; voted $200,000 bonds. Address The Mayor. (Lately noted.)

S. C., Greenville—Greenville County plans road improvements; will vote July 24 on $600,000 bonds. Address County Commrs.

S. C., Seneca—Town plans paving streets in business section; voted $48,000 bonds. Address The Mayor. (Lately noted.)

S. C., Spartanburg—City plans street improvements, park developments, and additional fire department buildings and equipment; contemplates $500,000 bond issue. Address Mayor Floyd.

Tennessee—State Dept., of Highways and

Public Works, Nashville, let contracts for 6 roads as follows:

Madison County, 14.7 mi. cement concrete between Jackson and Haywood County line, Federal Aid Proj. No. 69, to Harry McD. Hays, Worthington, Ind., at $484,000; to same firm at $105,000 for bridges over 20-ft. of span; Montgomery County, 2 sections; 2.2 mi. bituminous penetration surface on coarse stone base, between Clarksville and new Cumberland River Bridge, Federal aid, Proj. Nos. 94 and 16, to Morse Construction Co., Nashville, Tenn., at $130,000; Grundy County, 21.2 mi. grading, drainage and burnt slate surfacing, between Monteagle and Altamont, Federal aid, Proj. No. 114, to Brown Contracting Co., Chattanooga; Cumberland County, 12.06 mi. grading, drainage and burnt slate surfacing, between Pickett County line, State Aid, Proj. No. 117, at $35,000; 12.06 mi. bituminous macadam surfacing on hand placed base, between Livingston and Putman County line, State Aid, Proj. No. 118, at $157,000. (Lately noted.)

Tenn., Martin—City will receive bids until July 9 to improve 10 mi. streets; approximate quantities are: 50,000 lin. ft. curb and gutter; 10,000 cu. yds. grading, etc.; 60 storm water inlets and catch basins; 125,000 sq. yds. penetration method surfacing, etc.; plans, etc. from D. W. Harper, Mayor; F. S. Parrigin, Engr.

Tenn., Springfield—State Dept., of Highways and Public Works, Nashville, will receive bids until July 6 for 10.7 mi. bituminous macadam penetration on hard surface base, between Springfield and Davidson County line, S. A. Proj. No. 119; plans, etc., on file; J. G. Creveling, Commr. (Lately noted.)

Tex., Abilene—City will receive bids until July 13 for 30,000 sq. yds. paving; H. H. Batjer, Engr. (Lately noted.)

Tex., Angleton—Brazoria County will receive bids until July 6 to improve 3.18 mi. State Highway No. 19, from Angleton toward Anchor, Federal Aid Proj. No. 351-C; also for 5 concrete culverts; plans, etc., from E. N. Gustafsen, Engr., Angleton, Frank K. Stevens, Sec. Road Commrs., Angleton, and from State Highway Dept., Austin; J. T. Loggins, County Judge.

Tex., Angleton—Brazoria County plans 6 mi. 16-ft. shell road on S. H. No. 19, from Angleton to Flores Bayou, Brazoria County; estimated cost $50,369; E. N. Gustafson, County Engr.

Tex., Austin—Travis County, Precinct No. 2, plans grading and constructing drainage structures on Georgetown road, between Walnut Creek and Williamson County line; approximate cost $45,000; Jim Riley, Commr. of Precinct; O. Leonard, County Engr.

Tex., Cameron—Milam County plans building Gause-Brazos River section of State Highway No. 43; approximate cost $65,000; State Highway Comn., granted $20,000 additional aid; J. T. Kemp, County Judge; A. F. Mitchell, County Engr.

Tex., Cleburne — Johnson County, Venus Dist., plans road building; will vote July 21 on $40,000 bonds. Address County Commrs.

Tex., Crockett — Details under Bridges, Culverts, Viaducts.

Tex., Dallas—City plans widening to 70 ft. Live Oak St. from St. Paul to Liberty! cost $390,000. Address City Plan Comn.

Tex., El Paso—City contemplates paving Main St. from Mesa Ave. to N. Oregon St., along north side of San Jacinto Plaza. Address The Mayor.

Tex., Falfurrias—Brooks County will receive bids in about 30 days for 10 mi. S. H. No. 12; gravel and caliche surface; estimated cost $130,000; F. A. Brooks, County Judge; H. S. Bidell, County Engr.

Tex., Fort Worth—City let contracts to West Texas Construction Co., Fort Worth, to pave Evans Ave. from Mulkey to Capps, and New York Ave. from Ramsey to Capps; to General Construction Co., Fort Worth, to pave W. Oleander St. from 8th Ave. to Harris. Will receive bids to pave E. Rosedale St. from Evans Ave. to Freeman St. Plans paving 6th Ave. from 5th to 6th Sts. Address City Sec. Snow.

Tex., Greenville—Hunt County plans grading, constructing culverts, etc. on 17 mi. road from Jacobi to terminus of Ladonia-Fannin County Pike, through Fairlee. Address Road Comm. of Chamber of Commerce, Greenville.

Tex., Hondo—Medina County will receive bids until July 6 for 117,600 sq. yds. 1-in. cold rolled rock asphalt surface treatment on 13.44 mi. State Highway No. 2; A. Y. Walton, County Engr.; R. J. Noonan, County Judge.

Tex., Houston—Details under Land Developments.

Tex., Kountze—Sec. of Agriculture, U. S. Bureau of Public Roads, Washington, D. C., approved plans for 15 mi. 16-ft. gravel road, on S. H. No. 8, Beaumont-Silsbee road, from 2 mi. north of Jefferson County line to Jasper County line, Hardin County, Federal Aid Proj. No. 354; estimated cost $167,903.50; Geo. C. Brown, County Engr.

Tex., Lubbock—Details under Land Developments.

Tex., McKinney — Collin County let contracts to S. J. Allen & Sons, for roads in 4 districts as follows: McKinney-Frisco, McKinney-Foncine, McKinney-Weston and McKinney-Chambersville.

Tex., Marlin—Falls County plans 19 mi. 18-ft. gravel road on State Highway No. 44, between Chilton and Milam County line; approximate cost $320,000; W. S. Hunnicut, County Judge, Marlin; J. P. Wehrung, Engr., Lott, Tex.

Tex., Mount Pleasant—Titus County plans 1.9 mi. gravel road on S. H. No. 35; Dan M. Cook, County Judge; H. S. Wilder, County Engr.

Tex., Tyler—Smith County will receive bids until July 6 for 3 road projects as follows: Surface 1.57 mi. State Highway No. 15; inverted penetration bituminous macadam topping, Federal Aid Proj. No. 115; 11¼ mi. inverted penetration bituminous topping on State Highway No. 15, section of Federal Aid Proj. No. 147; surface 7.4 mi. State Highway No. 37, from Swan north through Lindale, inverted penetration bituminous topping; D. K. Caldwell, County Engr.; W. Marsh, Chmn., Highway Comn., Tyler.

Tex., Waco—City plans opening following streets: 7th from Austin to Washington; 11th from Austin to Columbus; 13th from Austin to Franklin; 21st from Washington to Columbus, and from Barnard to Jefferson; Ben C. Richards, Mayor.

Va., Abingdon—Washington County plans expending $56,000 for road from old Glade Springs to County dist. line at Saltville, Va. Address Board of Supvrs.

Va., Blacksburg—Business Mgr. of Polytechnic Institute will receive bids until July 7 to grade for athletic field, and build about 1 mi. 6-in. macadam surface road; plans, etc., from R. B. M. Begg, Civil Engr., Blacksburg.

Va., Graham—City receives bids until July 5 for paving certain streets; 15,000 sq. yds. pavement; 8000 lin. ft. combination curb and gutter; 12 inlets; 400 lin. ft. 15 to 24-in. vitrified clay sewer pipe; one course cement concrete, and sheet asphalt concrete, on concrete base laid on present macadam scarified and reshaped, or sheet asphalt and asphaltic concrete on present base; plans, etc., from V. L. Sexton, Atty., or Chas. B. Davis, Engr., Bristol, Va.

Va., Richmond—City will receive bids until July 9 to pave Broad St. from Laurel St. to Boulevard; Durax block, vitrified brick or sheet asphalt; plans, etc., from Allen J. Saville, Director of Public Works.

Va., Roanoke—City plans improving:—Tazewell Ave. from 8th to 10th St.; London from 7th to 15th; Peach and Gainsboro roads from Harrison Ave. to City Park, grade and lay stone; Park, from Campbell to Salem Aves., cobblestone half way, and penetration macadam the balance; Kimball Ave. from Rutherford Ave. to Lynchburg road, penetration macadam; Rutherford Ave. between Commonwealth and Kimball, penetration macadam. Address Mayor Fishburne.

W. Va., Bluefield—City plans widening Bland St., and East Princeton Ave.; also contemplates resurfacing with sheet asphalt Princeton Ave. from Lee to Mercer, also Raleigh and Federal Sts. Address City Mgr. Ridley.

W. Va., Charleston—City plans expending between $175,000 and $200,000 to pave about 33 streets; Harold Matthews, Chmn. of Street Comm.

W. Va., Huntington—City will receive bids until July 13 for following: Resurface 4th Ave. from 9th to 8th; 8th from 4th to 3rd; 3rd from 8th to end of paving on 23rd and from Johnson's Lane to 8th; 5th from 3rd to 4th Aves.; Marion Court from 7th Ave. to 6½ Alley; 31st road from end of present paving at 31st St. south 1000 ft.; 6½ Alley, from 1st to 2nd Sts.; plans, etc., from A. B. Maupin, City Engr.

W. Va., New Martinsville—Wetzel County, Grant Dist., plans road improvements; voted to issue bonds. Address County Commissioners.

W. Va., Philippi—City plans additional street paving; voted bonds. Address The Mayor.

## Sewer Construction.

Ala., Birmingham—City let contract at $12,001 to Long & McPolland for construction of sanitary sewer on Ensley Highlands. (Lately noted.)

Ark., McGehee—City is having plans prepared for installation of sewer system; work will consist of more than 11 mi. of pipe, a pumping system to get the sewage to the treatment plant, and construction of treatment plant; cost about $100,000; H. L. Shannon, Mayor, M. Z. Baer, Ch. Sanitary Engr.

Fla., Miami Beach—City let contract to J. B. McCrary Co., of Atlanta, Ga., at $85,149.13 for constructing approximately 7 mi. of sanitary sewers and at $21,993.72 for constructing about one mi. of storm sewers. (Lately noted.)

Fla., St. Petersburg—Details under Road and Street Construction.

Fla., Tampa—City opens bids July 3 to construct sanitary sewer on Osceola St., from Rome to Willow Ave., estimated amount of work, 600 lin ft. of 8-in., 650 ft. lin ft. of 6-in. terra cotta pipe, twenty-two 8x4-in. and twenty-two 6x4-in. Y's, 2 manholes; Charles H. Brown, Mayor, Commr.

Md., Annapolis—Details under Road and Street Construction.

Mo., Cameron—Details under Water Works.

Mo., Kahoka—City will vote July 10 on $60,000 bonds for sewers, $15,000 for extending and improving water works; $18,000 for paving several streets. Address The Mayor.

N. C., Burlington—Details under Road and Street Construction.

S. C., Camden—City plans extending sewerage system into Ward 1 and probably into Ward 3, contemplates voting on $10,000 bonds. Address The Mayor.

Tex., Beaumont—City let contract to Smith Bros. of Dallas, Texas, for laying sewers; Terrell Bartlett, Engrs. (Lately noted.)

Tex., Houston—Details under Land Developments.

Va., Danville—City voted $50,000 bonds for sewer construction. Address The Mayor. (Lately noted.)

Va., Graham—Details under Road and Street Construction.

## Telephone Systems.

Tex., Houston—Details under Land Developments.

## Textile Mills.

Ala., Geneva—D. H. Morris, Jr. and associates will soon call for bids for construction of cotton mill. (Lately noted.)

Ala., Opp—Micolas Cotton Mills let contract to Algernon Blair Contracting Co., Montgomery, Ala., to erect cotton mills. (Lately noted.)

Ga., Cedartown—United States Finishing Co., Henry B. Thompson, acquired plant of Blue Springs Dyeing & Finishing Co. (Lately noted.)

Ky., Princeton—Princeton Hosiery Mills, Judge G. G. Harrison, Pres., will erect $25,000 addition to plant; expend $5000 for machinery and several thousand dollars for water softening plant.

La., New Orleans—International Harvester Co., Chicago, Ill. will transfer twine mills from Auburn, N. Y. to New Orleans; Wm. M. Goregg, Supt. Auburn plant.

N. C., Henrietta—Henrietta Mills, S. B. Tanner, Pres., will improve Mill No. 1, install new equipment to manufacture colored goods. (Lately noted to increase capital to $3,700,000.)

N. C., Rocky Mount—Rocky Mount Mfg. Co. let contract for addition to plant; J. E. Sirrine & Co., Engr., Greenville, S. C.

N. C., Roxboro—A. T. Baker Co. of Manayunk, Pa., plans erection of cotton mill, wires *Manufacturers Record*: Proposed mill will be for the manufacture of pile cotton fabrics; initial unit to be one story, daylight construction; 192x96 ft.; will install 30 looms and necessary equipment; will purchase power; has group of employees house under construction; J. E. Sirrine & Co., Engrs., Greenville, S. C.; G. W. Kane, Contr., Roxboro, N. C.

S. C., Gaffney—Derry Damask Mills, capital $100,000, organized withh J. R. Mallory, Pres. of Landrum, S. C.; Dr. W. K. Gunter, Sec.; has taken over the Palmetto Damask Mills.

S. C., Greenville—Southern Worsted Corp. P. E. Greer, Pres., let contract to Gaston Construction Co., Gastonia, N. C. to construct worsted mill; one story brick and timber; 110,000 sq. ft. floor space; install about 6000 spindles and 120 looms; electric power; cost $250,000; Lockwood, Greene & Co., Engrs., Piedmont Bldg., Charlotte, N. C. (Lately noted.)

S. C., Spartanburg—Drayton Mills, Ben Montgomery, Pres., will manufacture tissue ginghams.

S. C., Spartanburg—E. E. Child of Whitmire, S. C., reported to have acquired the Model Mill and convert into textile manufacturing plant. (Lately noted.)

Tenn., Chattanooga—Clyde Wilkins has acquired interest in Champion Hosiery Mills; will double output of plant; will equip for manufacturing silk hosiery.

Tex., Corsicana—Roscoe Stewart will erect cotton mill.

Va., Norfolk—Jealous & Fitch, Inc., of Boston, Mass., have leased Margolius Bldg., Granby and 22nd St. for the Virginia Worsted Co. which will begin manufacturing worsted yarns about Jan. 1. Wire from the Norfolk-Portsmouth Chamber of Commerce to the Manufacturers Record states that Jealous and Fitch have leased Margolius Bldg. for five years with privilege of renewing lease, but may build own building later; structure contains about 15,000 sq. ft. of floor space and is now being renovated, will install machinery.

## Water Works.

Ala., Birmingham—Imperial Coal & Coke Co. will install water works system at Bradford Mines with reservoir or standpipe with capacity of 100,000 gals; system will also include septic tank system of sewers; water works system will include ½ mi. of mains for distribution of water, equipped with liquid chlorine apparatus.

Ark., Altheimer—Robert Bowen, Chrm. of Improvement Dist. Commrs., to install water works system; plans include deep well, 60,000 gal. capacity tank, etc. for 60 lb. pressure; bids opened July 3.

Ark., Camden—The Arkansas Light & Power Co. will expend about $100,000 on improvements to plant; will install filtering plant with output of 1,500,000 gals. of water daily; cost $40,000; construct new system of water mains, etc.

D. C., Washington—Maj. Max C. Tyler, U. S. Army Engr. receives bids until July 20 for construction of 2400 ft. of new conduit from Great Falls through surrounding hills.

Fla., Miami Beach—City will install approximately 9 mi. of 6 and 8-in. pipe lines; $100,000 available; H. H. Horn, Supt. Water Dept.

Fla., Seabreeze—City opens bids July 16 to furnish material, labor, etc. for water works; 4500 ft. of 8-in. and 4500 ft. of 6-in. cast iron pipe and specials; 18 two-way hydrants with steamer connections; seven 8-in. and fourteen 6-in. gate valves; carting pipe per ton, labor installing pipe per foot; H. D. Gilmore, Clk.

Md., Catonsville—Details under Land Developments.

Mo., Cameron — City defeated bond issue for water works, sewer and electric light improvements. Address The Mayor. (Lately noted.)

Mo., Kahoka—Details under Sewer Construction.

Mo., Maysville—City will improve water works system; Shockley Engineering Co., Kansas City, Mo., is preparing estimates. (Lately noted.)

Mo., Poplar Bluff—City will probably improve water works; Address The Mayor.

N. C., Burlington—Details under Road and Street Construction.

Okla., Woodward—City let contract at $170,000 for water works extension consisting of 1,000,000 gal. capacity steel reservoir, 4 new wells and water mains to the city. Address The Mayor.

Tenn., Bristol—N. H. Massengill, G. P. Biedleman, Commrs. interested in installing filter at Henry Preston Springs.

Tenn., Trezevant—City voted $35,000 bonds for water and light plant; Jeff J. Blanks, Mayor. (Lately noted.)

Tex., Houston—Details under Land Developments.

Tex., New Braunfels—Details under Flour, Feed and Meal Mills.

Tex., Port Arthur—City let contract at $10,350 to Layne & Bowler of Houston, Tex., for well at Port Neches, approximate capacity 1500 gals. per minute.

W. Va., Charleston—West Virginia Water & Electric Co. will lay 8-in. water main on Court Street.

W. Va., Fairmont—City will probably install new water main, 400 ft. long and 12-in. in diam; J. Clyde Morris, Water Commr.

## Woodworking Plants.

Fla., Miami—Powell Furniture Co., capital $75,000, incorporated with Benjamin I. Powell, Pres.-Treas.; J. G. Allcorn, Sec.

Va., Crewe—Crewe Furniture Co., Inc., capital $50,000, chartered with W. A. Lawson, Pres.; A. L. Lenave, Sec.

# FIRE DAMAGE

Ala., Albany—Tavern Hotel. Address The Proprietor.

Ala., Alexander City—Saw mill of H. J. Steverson; loss $11,000.

Ala., Birmingham—Plant No. 1 of the Connors Steel Co., loss $200,000; George Connors, Pres.

Ark., Eldorado — Democrat Printing & Lithographing Co. and the Barron Undertaking Co.'s plants at 213-215 N. Jefferson St., loss $40,000.

Fla., Brewster—Phosphoric Acid unit of the American Cyanide Plant; loss between $400,000 and $500,000.

Ga., Columbus—Main building of the W. T. Harvey Lumber Co. at 15th St. and 9th Ave.; loss $75,000; John Slaughter, Gen. Mgr. of company.

Ga., Moultrie—Hall Hardware Co.'s building; Lewis Millinery Co.'s store; loss $100,000.

Ky., Paintsville—J. K. Butcher's flour mill.

Md., Elioak—Wm. Gardner's residence; loss $10,000.

Mo., St. Louis—Randazzo Macroni Co.'s building.

Mo., St. Louis—Meyer Bros. Drug Co.'s buildings, Elm St. between 4th St., Carl F. G. Meyer, Pres.-Gen. Mgr.; loss $250,000.

Md., Elkton—Williams Barber Shop owned by Lloyd McLane; Atlantic & Pacific Tea Co.; Elkton Candy Land; Alagia Department Store; American Stores Co.; Cohen Shoe Store; Electric Shoe Repair Co.; total loss $50,000.

N. C., Hickory — Finishing and packing room of the Hickory Chair Manufacturing Co. loss $125,000.

Okla., Guthrie—Bridge over Santa Fe R. R. Address C. E. W. Felt, Ch. Engr., Santa Fe System, Chicago, Ill.

Okla., Hockerville—The Indiana Mill; loss $75,000.

Tenn., Chattanoga—J. E. Davis' residence, 1 Crest Road, Mission Ridge; loss $10,000.

Tenn., Rockwood—Ensminger Building, owned by Ensminger & Fox, Inc.; loss $250,000.

Tenn., Smithville—Staley & Evans' store; Webb Drug Co.'s building; Smithville Review; Colvert & Sons' store.

Tex., Dallas—Sherwin-Williams Paint Co.'s plant; loss $35,000.

Tex., Houston—Sylvan Beach Cafe at Sylvan Beach; loss $10,000.

Tex., Quanah—Worth Cafe; Willis Rooming House.

Va., Charlottesville—Feuchtenberger building occupied by Star Bakery, Decker Billiard Parlors; estimated loss $45,000.

Va., Lynchburg—Farmers' Feed & Seed Co.'s store; loss $30,000.

W. Va., Elkhorn—American Store Co.'s building.

W. Va., Richmond—Thirteen dry kilns of J. D. Wescott & Sons handle factory, estimated loss $40,000.

# BUILDING NEWS

## BUILDINGS PROPOSED

### Association and Fraternal.

Fla., Sarasota—Sarasota Bay Post, American Legion, purchased site, Banana and Palm Aves., and will erect $20,000 Spanish-Colonial type building; 32x66-ft. auditorium, stage, billiard room, kitchen, etc.; plans drawn.

Mo., Marionville—Ancient Free and Accepted Masons plan to erect $14,000 building; 45x80 ft.; 2 stories; Carthage stone.

Mo., Poplar Bluff—Ancient Free and Accepted Masons plan to erect $100,000 temple.

Okla., Holdenville — Holdenville Masonic Lodge, R. E. Bailey, Pres., will erect 5-story temple, Broadway and 7th St.; fireproof; stores on first floor, 3 floors for offices, lodge on top floor; cost $150,000; bids opened July 10. (Previously noted.)

Okla., Okmulgee—Boy Scouts, Carl Barnes, Executive, plan to erect $10,000 native stone lodge on 20-acre tract, five miles north of Okmulgee; 1 story; 56x72 ft.; dining and assembly room to seat 200, kitchen, etc.; also plan to construct dam and swimming pool, $2500.

S. C., Florence—Young Men's Christian Assn. plans to erect additional story to present 2-story structure and erect annex to contain gymnasium and club rooms and swimming pool; cost $60,000 to $80,000; city to furnish $10,000, Atlantic Coast Line R. R. $65,000 to $75,000; W. J. Wilkins & Co., Archts., Florence, prepared tentative plans.

Tex., Breckenridge—Young Men's Christian Assn. plans to erect $75,000 building.

Tex., El Paso—Benevolent Protective Order of Elks considering erecting building; tentative plans call for $200,000 hotel and lodge building, probably Myrtle Ave. and Campbell St.; 10 stories; site 120x155 ft.

Tex., Mercedes—American Legion purchased site on 2nd St. and plans to erect building.

### Bank and Office.

N. C., Brevard—Brevard Banking Co. will not begin erection of building lately noted until 1924.

N. C., Southern Pines—Dr. Wm. C. Mudgett will erect $10,000 office building; construction begun.

Tex., Corsicana—Chamber of Commerce is interested in erection of 5-story office building; Dr. L. C. Polk, Chmn. of Comm. on financing, etc.

Tex., Dallas—Lone Star Gas Co., R. A. Crawford, Vice-Pres.—Gen. Mgr., will erect $175,000 fireproof office building, Harwood and Wood Sts.; 4 stories, with foundation constructed to carry 8 additional floors; reinforced concrete and brick; 83x90 ft.; Lang & Witchell, Archts., Southwestern Life Bldg., Dallas.

Va., Chincoteague Island—Bank of Chincoteague, D. J. Whealton, Pres., will erect 28x54-ft. brick bank building.

### Churches.

Ala., Attalla—Church of Christ, T. S. Williams, Sec., Bldg. Comm., will erect 1-story building, 10th St. and Forrest Ave.; frame; cement basement; wood floors; brick foundation; composition shingle roof; cost $40,000; architect not selected. (Lately noted.)

Ala., Demopolis — Christian Church purchased lot and plans to erect building. Address The Pastor.

Ala., Selma—Church St. Methodist Church will erect $30,000 Sunday school annex, Church and Dallas Sts. Address The Pastor.

Ala., Selma — First Presbyterian Church plans to enlarge Sunday school; cost $10,000; also considering expending $2000 to remodel manse. Address The Pastor.

Fla., Daytona Beach—Presbyterian Church, Mrs. M. E. Griggs, Mrs. B. R. Hagenwald and others, Finance Comm., purchased site, Palmetto and Harvey Sts., and plans to erect building.

La., Lake Charles—Woodbury Congregational Church, Colored, will erect $15,000 brick building on Boulevard; 39x70 ft.; R. S. McCook, Archt., Lake Charles.

N. C., Charlotte—Moravian Congregation, Hanna Hall, Y. M. C. A., plans to erect building on Hermitage Road, Myers Park. Address Bishop Edward Rondthaler, Winston-Salem.

N. C., Charlotte—Caldwell Memorial Presbyterian Church, Rev. G. F. Bell, Pastor, will erect $12,000 Sunday school building; brick veneer; granite foundation; auditorium, kitchenette, classrooms, etc.

N. C., Weaverville—Baptist Church has tentative plans to erect $10,000 building, Main St. Address The Pastor.

Okla., Madill — Church of The Nazarene, Rev. Wade L. Nelson, Pastor, will erect building to replace burned structure.

S. C., Spartanburg — First Presbyterian Church, Dr. H. W. DuBose, Pastor, has option on site at E. Main and Chestnut Sts., and plans to erect building.

S. C., Sumter—Church of Holy Comforter, Joseph Palmer, Sec., Bldg. Comm., will erect 2-story parish house; stucco on brick; 11 classrooms; Gaillard Walker, Archt., Winnsboro; bids opened July 9.

Tenn., Chattanooga—Highland Park M. E. Church, South, J. F. Holbert, Chmn., Bldg. Comm., will erect $50,000 Sunday school addition, Union and Beech Sts.; 2 stories and basement; 55x100 ft.; brick; tile roof; social room to seat 500 to 600, kitchen, etc., in basement; R. H. Hunt, Archt., James Bldg., Chattanooga; bids opened July 5. (Previously noted.)

Tenn., Jackson — North Jackson Baptist Church, Rev. Earl Gooch, Pastor, plans to enlarge building.

Tenn., Johnson City — Central Baptist Church plans to erect Sunday school annex. Address The Pastor.

Tenn., Memphis—First Methodist Church, Rev. C. Wesley Webdell, Pastor, plans to remodel auditorium and erect Sunday school; total cost $200,000.

Tenn., Memphis—Madison Heights Methodist Church, Rev. T. W. Lewis, Pastor, will expend $25,000 to remodel building.

Tenn., Memphis — Seventh St. Baptist Church, Rev. Isaac N. Strother, Pastor, contemplates erecting $15,000 Sunday school building.

Tenn., Memphis—Trinity Methodist Church, Rev. W. W. Adams, Pastor, will erect $50,000 auditorium.

Tenn., Ridgely—First Methodist Church, C. H. Hatcher, member of Bldg. Comm., will erect brick and stone building; auditorium to seat 400, Sunday school, 150; kitchen and dining room in basement; cost $30,000; J. Frazier Smith, Archt., Memphis. (Previously noted.)

Tenn., St. Elmo—(Branch of Chattanooga)—Baptist Church, Rev. U. S. Thomas, Pastor, purchased old town hall site and plans to erect $80,000 building.

Tex., Corpus Christi—First Congregational Church, Colored, will erect building, Waco and Winnebago Sts.; concrete foundation begun. Address The Pastor.

Tex., Fort Worth—Mulkey Memorial Methodist Church, R. E. Foster, Chmn., Bldg. Comm., will erect 2-story Sunday school building at rear of present structure; gymnasium.

Tex., Fort Worth—Travis Avenue Baptist Church, Rev. C. E. Matthews, Pastor, will erect 4-story Sunday school building adjoining church; swimming pool, gymnasium, dressing and locker rooms, mezzanine floor for classrooms, etc.; plan to complete church auditorium later.

Tex., Marshall — Methodist Church will erect $40,000 Sunday school addition, Lafayette St.; 3 stories; brick; stone trim; G. C. Lancaster & Son, Archts., Marshall; construction started.

W. Va., Sutton—Board of Trustees of St. Paul's M. E. Church, South, Lee Rader, Sec., will receive bids until July 15 for erection of building; plans and specifications from Levi J. Dean, Archt., Huntington, and from Mr. Rader, Sutton. (Previously noted.)

### City and County.

Ark., Camden — Courthouse — Ouachita County Commrs., J. C. Russell, Chmn., will receive bids until July 23 to erect 1-story brick addition to courthouse; plans from Thompson & Harding, Archts., Little Rock and El Dorado, and from office Mr. Russell, Camden.

Mo., Joplin—Memorial Hall—City, Taylor Snapp, Mayor, will vote July 24 on $250,000 bonds to purchase site and erect memorial hall.

Mo., St. Joseph—Civic Center—City plans to erect civic center with city hall as nucleus; buildings to include soldiers' memorial; Bennett, Parsons, Frost & Thomas, Archts. 105 S. La Salle St., Chicago.

La., Opelousas—City Hall—City plans to erect city hall. Address City Council.

N. C., Durham—Home—Durham County will erect county home; will probably sell present property and secure new site; J. Murray Nelson, Archt., Durham. (Previously noted.)

N. C., Fayetteville—Courthouse—Cumberland County plans to erect courthouse and jail; will probably issue bonds. Address County Commrs.

Tenn., Huntsville—Jail—Scott County Jail Comn., H. K. Pemberton, Chmn., will receive bids until July 14 to erect addition to jail; proposals received on construction complete, including cell work, plumbing and wiring, or separate bids for addition and wiring and cell work and plumbing; Clarence T. Jones, Archt., Chattanooga.

Tex., Dallas—City Hall—City will erect Highland Park City Hall and Community House, Drexel Drive, south of Highland Park fire station; Spanish renaissance design; hollow tile and stucco; Spanish tile roof; hardwood floors; plaster walls; Lang & Witchell, Archts., Southwestern Life Bldg., Dallas.

Tex., Marlin—City Hall — City, W. T. Goode, Mayor, plans to erect brick and concrete city hall; cost about $15,000; 1 and 2 stories; about 20x60 ft.; concrete floors and foundation; Roy E. Lane, Archt., Waco; Levi Goodrich, City Engr., Marlin; details not decided. (Lately noted.)

Va., Wise—Detention Home—Wise County voted $100,000 bonds to erect detention home for girls. Address County Commrs.

## Dwellings.

Ark., El Dorado—W. F. McWilliams will erect $14,000 residence, Summit Ave. and Wesson St.

Fla., Chipley—Dr. G. C. Miller will erect garage and residence; brick and lime rock veneer; sand rock trim.

Fla., Eustis—L. W. Brady, southern representative, Monito Hosiery Co., Charleston, S. C., purchased site, Morningside Drive, Sentinel Hill, and is reported to erect residence.

Fla., Miami—L. T. Highleyman will erect $40,000 Spanish type residence, Palm Island; 2 stories; concrete and tile; 75x63 ft.; paved patio, loggia, fountain, etc.

Fla., Miami—E. C. Upton purchased lot, S. W. 5th St. and 10th Ave., and plans to erect residence.

Fla., Miami—Mrs. Mabel C. Upton purchased lot, S. W. 5th St. and 10th Ave., and plans to erect residence.

Fla., Miami—H. E. Glickman will erect concrete block residence, 1233 S. W. 13th Court.

Fla., Miami Beach—Frank Smathers will erect 6 Spanish type dwellings, Alton and North Bay Roads, near 45th St., Nautilus subdivision; concrete block with stucco finish; 6 rooms, baths, alcoves, built-in garages, screened porches, etc.; Spanish tile roofs; outside stairways; cost $8000 to $10.000 each; Walter C. De Garmo and P. E. Paist, Asso. Archts., Miami.

Fla., Palm Beach—Jas. H. Cromwell, Philadelphia, Pa., purchased lake front site, Adams addition, and is reported to erect residence in fall.

Fla., St. Petersburg—Schooley-Murphy Co., is erecting $25,000 Spanish type, hollow tile and stucco dwelling, 1420 Euclid Blvd.; 10 rooms and 3 baths; porches; tile roof; H. E. Wendell, Archt., St. Petersburg; owner builds.

Fla., Sarasota—John Ringling will erect residence on Indian Beach estate; Dwight J. Baum, Archt., Spuyten Duyvil Parkway and Waldo Ave., New York.

Ky., Ashland—B. F. Andre purchased half-square tract, Hilton Ave. near 24th St., and plans to erect several bungalows.

Ky., Ashland—Boyd County Realty Co., Claire Miller, Mgr., Ashland Div., American Rolling Mills Co., purchased 30 lots in Brickey Tract and will erect 30 six-room and bath dwellings; furnace heat; also construct 20 dwellings in Forest Hills; all to house employees of American Rolling Mills Co. (Previously noted in part.)

Md., Baltimore—Geo. Goebel, 1218 W. Mt. Royal Ave., purchased lot on Graham Place, Catonsville, and plans to erect residence.

Md., Baltimore—Allan W. Mason, Vice-Pres., Baltimore Trust Co., 25 E. Baltimore St., will erect $20,000 residence, Gittings Ave. near Charles St.; 2 stories; frame; 56.6x58.10 ft.

Md., Baltimore—Wesley Fennell, 1813 Ruxton Ave., will erect 1½-story frame bungalow, Kathland Ave., east of Forest Path; 30x40x25 ft.; cost $12,000.

Md., Baltimore—Geo. R. Morris Organization, Morris Bldg., will erect 2-story dwelling and garage, west side, and 2½-story dwelling and garage, east side Brookwood Road, north of Edmondson Ave.; both frame; 24x27 ft. and 26x38 ft.; slate roofs; steam heat; total cost $12,000; Geo. R. Morris, Archt.; owner builds.

Md., Baltimore — Albert W. Adt, Pres.-Treas., and John B. Adt, Vice Pres.-Sec., John B. Adt Co., 326-44 N. Holiday St., will erect $12,000 frame residence and garage, south side Park Lane, west of Wilmslow Road; 38x43 ft. and 18x24 ft.; 2 stories; slate roof; hot water heat; F. J. Gaines, Archt.; owners build. (Lately noted.)

Md., Baltimore—Allied Construction Co., 445-47 Equitable Bldg., will erect 20 two-story brick dwellings, Reisterstown Road and Virginia Ave.; total cost $80,000; also five 1½-story frame dwellings, Bland Ave., south of Manhattan Ave.; 26x32 ft.; steam heat; total cost $15,000; plans and consrtuction by owner.

Md., Baltimore—Geo. A. Foos, Sec., South Baltimore Harbor & Improvement Co., 2406 Calvert St., will erect $15,000 residence, north side 39th St., west of Juniper Road; 38x30x32 ft.; 2½ stories; brick.

Md., Baltimore—Welsh Construction Co., 11 E. Fayette St., will erect 7 bungalows, N. E. cor. Brightwood Ave. and Auburn Road; total cost $22,000.

Mo., St. Louis — Federal Home Building Corp., C. W. Beck, Pres., Tower Bldg., has contracts to erect 85 dwellings, flats and 6-family apartments; Eugene Paulus, Supt. of construction.

Mo., St. Louis—Geraghy Bldg. Corp., is erecting 8 dwellings in Arbor Terrace, 6500 block Natural Bridge Rd., and 10 in Dartmoor, cor. North and South and Clayton Rds.; stucco; hardwood floors; electric lights.

Mo., Springfield—W. F. McFarland, 1102 W. High St., will erect two $5000 dwellings, Pickwick and Florence Sts.; construction begun.

N. C., Charlotte—Kinney & Russell will erect 13 tenant houses, 400 block Johnson St.; total cost $10,000.

N. C., Greensboro—P. W. Cobb will erect $10,000 residence, W. Market St. extension.

N. C., Greensboro—B. H. Lloyd will erect $10,000 residence, Tate St. near Market St.

N. C., Greensboro—W. S. Lyon will erect $12,000 residence, Cedar St. near Gaston St.

N. C., Greensboro—W. W. Neal will erect $11,000 residence, S. Mendenhall St. near Market St.

N. C., Kinston—Herman H. Canady will erect residence.

N. C., Kinston—Clarence A. Jeffress will erect residence.

N. C., Winston-Salem—C. M. Miller will erect $12,000 ten-room residence, N. Spring St.

Okla., Tulsa—E. F. Black will erect $20,000 brick residence, 908 E. 19th St.

Okla., Tulsa—Mrs. Josephine S. Hall will erect $15,000 stucco residence, 1331 E. 19th St.

S. C., Hartsville—Jas. L. Coker will erect hollow tile and stucco residence; J. Carroll Johnson, Archt., Columbia.

Tenn., Chattanooga—Shaw & Etter, 2701-11 E. 30th St., East Lake, will erect 4 bungalows in Montague addition to Highland Park in addition to 5 already completed; 5 and 6 rooms; hardwood floors; composition roofs; hot air furnaces; will sell for $6000 to $7000 each. (Lately noted to erect 9.)

Tenn., Chattanooga—Dr. O. T. Buffalo will erect $14,000 two-story brick veneer building, Fort Wood St. near Palmetto St.

Tenn., Memphis—W. C. Candler will erect three $5000 brick veneer dwellings, 847-51-61 E. Parkway, South.

Tex., Beaumont—E. Conway Broun Co. will erect $20,000 two-story English type dwelling, Liberty Ave. and 9th St.

Tex., Corsicana—J. E. Whiteselle Lumber Co. is erecting 21 dwellings to house employees of Corsicana Cotton Mill; about 3 rooms each.

Tex., Houston—Wharton Weems will erect $12,000 residence, Mt. Vernon and Richmond Roads; 1 story; 8 rooms; brick veneer; wood shingle roof; 2-story box and batten garage.

Va., Richmond—Max E. Ruehrmund will erect 4 dwellings, 100 block Dooley Ave.; total cost $60,000.

W. Va., Charleston—Fritz Ulsamer will erect $10,000 residence, Valley Road.

W. Va., Charleston—John A. Parsons will erect 3 dwellings, Hansford St., 1 on Hunt Ave. and 1 on Garden St. and 3 on Chester Road; total cost $29,000.

W. Va., Morgantown—A. R. Waters, St. Petersburg, Fla., purchased 10 lots in Riverside Terrace addition and let contract to erect 10 dwellings; plans to erect additional dwellings if demand justifies.

W. Va., Wheeling—Fourth Street M. E. Church will erect parsonage on Poplar Ave. Address The Pastor.

## Government and State.

Ark., Little Rock—Arsenal—Arkansas National Guard leased arsenal building in City Park from City Council and will expend $10,000 to remodel.

Fla., Palm Beach—Post Office—Government will erect 21x15-ft. addition at rear of present building; 400 additional boxes. Address Miss Lola Hershberger, Postmistress, Palm Beach.

Md., Centerville — Armory—See Md., Hagerstown.

Md., Crisfield—Armory—See Md., Hagerstown.

Md., Cumberland—Armory—See Md., Hagerstown.

Md., Easton—Armory—See Md., Hagerstown.

Md., Hagerstown—Armories—State will erect armories at Hagerstown, Cumberland, Silver Springs, Centerville, Easton and Crisfield; about 100x150 to 175 ft.; brick and stone; steel trusses; concrete floors; probably slag roof; two to cost about $65,000 and others about $45,000 each; Robt. L. Harris, Archt., 13 W. Saratoga St., Baltimore; Brig. Gen. Milton A. Reckord, Maryland Trust Bldg., Baltimore, will supervise construction. (Previously noted.)

Md., Silver Springs — Armory—See Md., Hagerstown.

## Hospitals Sanitariums, Etc.

Ark., Little Rock — Arkansas Children's Home Society, Dr. O. P. Christian, Supt., will erect hospital at 8th and Wolfe Sts.; present plans call for 2 units to be erected at this time, cost $100,000; John P. Almand, Archt., Little Rock.

N. C., Durham—Lincoln Hospital will erect $150,000 building; 3 stories; fireproof; Milburn, Heister & Co., Archts., Union Savings Bank Bldg., Washington, D. C., and Durham; bids opened Aug. 1. (Previously noted.)

N. C., Raleigh—State Hospital, Dix Hill, Dr. Albert Anderson, Supt., will receive bids until July 10 for construction, including plumbing, of additions to Oaks, Male Epileptic and Female Epiletic Colonies and porch construction to male wards; plans and specifications from H. A. Underwood, Engr., Raleigh, and Dr. Anderson.

Tenn., Nashville—Meharry Medical College, Dr. John J. Mullowney, Pres., will remodel and erect 1-story addition to 2½-story George Hubbard Hospital; $90,000 available, including $40,000 for equipment; Asmus & Clark, Archts., Stahlman Bldg., Nashville.

Tex., Corsicana—Commrs. Court of Navarro County will receive bids until July 9 at office of A. P. Mays, County Judge, for construction of addition to Physicians & Surgeons Hospital; H. O. Blanding, Archt., Corsicana; plans and specifications at office of Judge Mays.

Tex., El Paso—Rotary Club, Owen White, Chmn., Hospital Comm., plans to erect tubercular hospital.

## Hotels and Apartments

Ala., Dadeville—Miller Hotel Co., Inc., C. E. Oliver, Chmn., Bldg. Comm., will erect $25,000 hotel; plans desired.

Fla., Leesburg—H. E. Barcus will erect apartment on E. Main St.

Fla., Miami—Miss M. Kate Magan will erect 3-story addition to apartment house, 126 N. E. 6th St.; cost $16,000.

Fla., Palmettto — J. C. Smith purchased Oaks Hotel and plans to erect addition; 3 stories; 24 rooms.

Fla., St. Petersburg—S. L. Fortis will erect $15,000 frame apartment house, 10th St. and 5th Ave., South; 12 suites.

Fla., Sarasota—Andrew McAnsh, Chicago, will erect $300,000 hotel and casino; concrete, brick and hollow fireproof tile; part fireproof and part slow burning construction; Wm. G. Kreig, Archt., 111 W. Washington St., Chicago; Carman Construction Co., Tampa, Probable Contr.

Ga., Louisville—Louisville Hotel Corp., incorporated with $25,000 capital; R. L. Bethea, R. G. Price and others; plans to erect $50,000 hotel.

Ky., Ashland—Buckingham Hotel Co., G. A. Nash, Sec., is considering tentative plans for hotel prepared by J. R. Gieske, Huntington, W. Va.

La., New Orleans—A. Menendez, 1920 Rich St., will expend $12,000 to remodel residence at S. Claiborne and Cadiz Sts. for apartment building and erect $6500 bungalow adjoining.

Miss., Columbia—Hugh L. White and associates will organize company to erect building to replace Arcade Hotel recently burned; 3 stories; 50 guest rooms; R. E. Lee, Archt., Hattiesburg.

Miss., New Albany—Mrs. Wm. Henderson, Prop., New Albany Hotel, Depot St., will erect brick building adjoining present structure.

Okla., Tulsa—F. R. Herod will erect 3-story 12-family apartment building; cost $55,000.

Okla., Tulsa—Mrs. L. L. Morrison will erect $25,000 apartment building at 220 W. 19th St.

S. C., Greenville—F. H. & J. G. Cunningham prepared plans for remodeling and erecting 2-story addition to Grand Opera House, Buncombe and Laurens Sts., for 50-room hotel and 8 stores; stucco; steel frame.

Tenn., Memphis—R. M. Hammond will remodel 4-story brick building on 3rd St. adjoining Catholic Club; cost $30,000; 54 hotel rooms; 3 stores and lobby on first floor; reface building with stonecote and tile trim; install elevator; remodel interior; W. C. Lester, Archt., Memphis.

Tenn., Nashville—Phil E. Dunnavant will erect $12,000 apartment house, 1404 Hawkins St.; 2 stories; brick veneer.

Tex., Denison—Barnett, Haynes & Barnett, St. Louis, prepared plans for Hotel Denison at Chestnut St. and Burnett Ave.; cost $350,000; 6 stories.

Tex., El Paso—Dr. G. N. Thomas will erect $50,000 apartment house, Montana and Magnolia Sts.; 2 stories; brick; slate roof; 10 suites of 3 and 5 rooms; private garage for each apartment; sleeping and service porches; Geo. C. Burnett, Archt., El Paso.

W. Va., Welch—John W. Blakely and Edw. O'Toole, Jr., will erect 4-story brick apartment house, Riverside Ave.; 90x70 ft.; hardwood floors; stone foundation; composition roof; hollow fireproof and interior tile; G. R. Ragan, Archt., 701 Colonial Bank Bldg., Roanoke, Va.; contract not let. (Lately noted to open bids June 5.)

W. Va., Wheeling—Emil Bey will erect 2-story 4-family apartment house, National Road, Fulton; cost $13,000; construction by owner.

## Miscellaneous.

Fla., Daytona—Clubhouse—Daytona Golf & Country Club, R. H. LeSesne, Chmn., postponed erection of clubhouse and will erect additions to clubhouse and caddy house. (Lately noted.)

Fla., Enterprise — Orphanage — Methodist Orphanage will erect dormitory.

Fla., Tampa—Home—Old People's Home, Mrs. E. S. Dickson, Pres., will erect $115,000 building on 12th St., Tampa Heights; 52 rooms, 4 sun parlors; A. H. Johnson, Archt., Tampa. (Lately noted.)

N. C., Marion—Clubhouse—Marion Lake Club, Inc., J. Q. Gilkey, Pres., will erect $20,000 building near Marion. (Previously noted.)

N. C., Thomasville—Orphanage—Thomasville Baptist Orphanage, F. P. Hobgood, Pres., Board of Trustees, will erect dormitory for boys, kindergarten building and 2 bungalows; all of unit type; also erect girls dormitory at Kennedy Home in Lenoir County. (Lately noted in part.)

S. C., Greenville—Funeral Establishment—W. D. Kendrick, J. S. Osteen and others purchased building on S. Main St. and will remodel and erect additions.

Tex., Brownwood — Convention Hall — Chamber of Commerce, R. Wright Armstrong, Sec., is promoting erection of $150,000 building for convention hall, gymnasium for high school, offices for Chamber of Commerce, office for county farm demonstration agents, quarters for American Legion Post; main building to be known as Brown County Soldiers' Memorial Hall.

Tex., San Antonio—Lumber Yard—San Antonio Lumber Co. will construct $10,000 lumber yard with office building and sheds on Fredericksburg Rd.

W. Va., Charleston—Clubhouse—Kanawha Holding Corp., H. R. Stapp, Pres., 812 Kanawha St., will receive bids until July 10 to erect $125,000 building; 1 story and mezzanine; 60x300 ft.; stucco and hollow tile; concrete, hardwood and tile floors; interior tile; steel sash and trim; wire glass; concrete foundation; tile roof; Louis J. B. Lott, Archt., Dayton, Ohio. (Lately noted.)

W. Va., Morgantown—Settlement House—Methodist Episcopal Church Missionary Society plans to erect settlement house in Scotts Run Dist.; cost $10,000.

## Railway Stations, Sheds, Etc.

Fla., Fort Myers—American Railway Express Co. purchased site on Hendry St. near Atlantic Coast Line depot and plans to erect building; Spanish architecture.

## Schools.

Ala., Jasper—Walker County Board of Education, J. Alex Moore, Supt., will erect schools at Beach Grove, Price Springs, Fairview, Aldridge, Galloway, Wyatt, Patton Hill, Gravelton, Hillard and Saragossa.

Ala., Tuscaloosa—City voted $500,000 bonds to erect $200,000 to $250,000 junior high school and 2 or more elementary schools; D. O. Whilldin, Archt., Title Guarantee Bldg., Birmingham. (Lately noted.)

Ark., Altheimer—School Board, A. H. McDonnell, Chmn., will receive bids until July 19 to erect building; separate bids for heating, plumbing and wiring; plans and specifications at office Mitchell Selligman, Archt., Pine Bluff.

Ark., Bassett—Shawnee Special School Dist. No. 10, C. M. Bell, Pres., will receive bids until July 9 to erect 2-story brick building; plans and specifications from Jas. H. Bliss & Son, Archts., Little Rock.

Ark., Magazine—Magazine Industrial Institute, Dr. Chas. E. Scott, Pres., will erect dormitory.

Fla., Lake Worth—Board of Public Instruction plans to erect 4-room addition to high school; election soon on $20,000 bonds.

Fla., Ocala—Board of Public Instruction plans to erect $80,000 school.

Fla., Delray—Special Tax School Dist., No. 6, will vote July 17 on $30,000 bonds to erect and improve buildings; Agnes Ballard, Secy., Palm Beach County Board of Public Instruction, West Palm Beach. (Lately noted.)

Fla., Summerfield—School Board will erect $18,000 building.

Fla., Wiersdale—Board of Public Instruction will erect $15,000 building.

Ga., Buena Vista—Board of Education, Roland B. Daniel, Supt., will erect 1-story combination high and grammar school; $30,000 bonds voted. (Lately noted.)

Ga., Decatur—Board of Education, F. T. Hopkins, Chmn., will receive bids until July 6 to erect and heat grade school on Ponce de Leon Ave.; plans and specifications at office Edwards & Sayward, Archts., 609 Chamber of Commerce Bldg., Atlanta; City Hall, Decatur, and Builders' Exchange, Atlanta. (Lately noted.)

Ky., Cayce — Cayce Consolidated School Dist. Trustees will erect addition to building.

Ky., Frankfort—City voted $125,000 bonds to erect high school. Address Board of Education. (Lately noted.)

Ky., Frankfort—Franklin County Board of Education will erect additional rooms at Peaks Mill School and at Bryant School; bids opened June 30.

La., Baton Rouge—Louisiana State Uni-

versity Bldg. Comm., R. L. Himes, Sec., will receive bids until July 6 to erect Hill Memorial Library at Greater Agricultural College; cost $300,000; 2 stories and basement; 200x135 ft.; auditorium to seat 4000; plans and specifications at office Theo. C. Link, Archt., Fourth floor, Capitol Bldg., Baton Rouge, Contractors and Builders Exchange, New Orleans, and Chamber of Commerce, Baton Rouge. (Lately noted.)

La., New Roads — Pointe Coupee Parish School Board, A. McFarland, Sec., will erect building; $100,000 bonds voted. (Lately noted.)

La., Starks—Calcasieu Parish School Board F. A. Ford, Act. Sec., Lake Charles, will erect $18,000 brick building at Starks; plans and specifications at office I. C. Carter, Archt., Lake Charles; will erect frame building for negroes at Vinton, and repair Iowa School; R. S. McCook, Lake Charles, Archt., for both structures; bids on all buildings opened July 3. (Lately noted in part.)

Miss., Florence, Route No. 2 — School Board, D. W. Webb, Sec., will erect school in Briar Hill School Dist.; 4 rooms; frame; bids opened June 5; plans and specifications at office County Supt. of Education, Brandon, and office Mr. Webb, Florence.

Mo., Marble Hill—Will Mayfield. Jr., College, Dr. Milford Riggs, Chmn., Bldg. Comm., Ironton, Mo., will receive bids until July 7 to erect boiler house and alterations and additions to building; plans and specifications at office L. B. Pendleton, Archt., 72 Demenil Bldg., St. Louis, and office Dr. Riggs.

Mo., Monroe City—Board of Education will erect high school; $75,000 bonds voted. (Lately noted.)

N. C., Kinston—School Board will enlarge Richard Lewis School at Payton Ave. and East St.

N. C., Mayodan—School Board will erect $60,000 building.

N. C., Rosemary—School Board will remodel present building and erect auditorium to seat 650; bids opened July 2; brick; Barrett specification roof; slate blackboards; Sanymetal toilet partitions; Hobart Upjohn, Archt., Aaron G. Alexander, Mgr., Grand Central Terminal, New York.

N. C., Ruffin—Board of Education of Rockingham County, L. N. Hickerson, Supt., Wentworth, will receive bids until July 9 to erect school; plans and specifications from Jas. W. Hopper, Archt., Leaksville.

N. C., Winston-Salem—Forsyth County School Board will erect addition to Waughtown School; 6 classrooms; brick; bids opened July 2; W. C. Northup, Archt., Starbuck Bldg., Winston-Salem.

Okla., Ada—Union Hill Dist. No. 41 will receive bids until July 5 at office Albert S. Ross, Archt., to erect 2-room brick building.

Okla., Holdenville—City voted $25,000 bonds to erect ward school; Tonini & Bramblett, Archts., Oklahoma City. (Lately noted.)

S. C., Allendale—School Trustees, J. L. Oswold, Chmn., will alter and erect addition to building; J. H. Sams, Archt., Columbia; bids opened July 3.

S. C., Charleston—Board of Education, W. O. Daum, Sec., Box 842, will erect 2-room addition to Washington School, fireproof corridors and stair towers and install steam heating plant; bids opened July 2; Warne, Tucker & Pattison, Archts., Charleston. (Lately noted.)

S. C., Charleston—J. D. Newcomer, Archt., 32 Broad St., will receive bids until July 10 to erect Florence Crittenton Training School; 2 stories; frame; 4990 sq. ft. floor space on each floor.

S. C., Marion—High School Dist. No. 1 voted $100,000 bonds to erect building; will contain gymnasium, dining room, kitchen, laboratories, etc., in addition to high school; Henry Mullins, Chmn., Board of School Trustees. (Lately noted.)

S. C., North Charleston—School Dist. No. 4. C. E. Lepley, Chmn., is considering election on $75,000 bonds to build 4-room addition to Chicora School and erect 5 colored schools.

S. C., Youngsville—School Board will erect building.

Tenn., Athens—Athens School of University of Chattanooga will erect gymnasium; cost $40,000; 72x100 ft.; brick and steel; composition roof; maple floors; Manley & Young, Archts., Knoxville.

Tenn., Nashville—Vanderbilt University, Dr. J. H. Kirkland, Chancellor, plans to erect 3 units for medical school and hospital; cost $2,000,000; main building, 458x337 ft., 4 stories and basement; 4-story nurses' building with sleeping porch; hospital building for 163 beds and various departments; is having plans prepared by Henry C. Hibbs, Nashville, for $280,000 memorial hall. (Lately noted in part.)

Tenn., Sweetwater—Tennessee Military Institute will erect library and quartermaster department, 42x100 and auditorium 55x100 ft.; brick and steel; concrete stairways and corridors; composition roof; Manley & Young, Archts., Knoxville.

Tex., Austin—University of Texas Board of Regents, Dr. Robt. E. Vinson, Pres., will erect $400,000 biological laboratory; 192x67 ft.; 4 stories and attic; hollow fireproof tile; cement, tile and linoleum floors; tile roof; reinforced concrete foundation; metal doors; ornamental terra cotta trim; passenger elevator; central heating plant; Herbert M. Green Co., Archt.-Engr., 620 N. Texas Bldg., Dallas; contract let about Aug. 1st. (Lately noted.)

Tex., Corsicana—Board of Education, H. D. Fillep, Supt., will receive bids until Aug. 7 to erect high school and 3 ward schools; brick; steam heat; mastic floors in corridors; auditorium and balcony in high school to seat 1000; lunch room to accommodate 300; 14 class rooms, library, 2 study halls, 4 laboratories and science rooms, 2 community rooms, 2 domestic science rooms, 2 mechanical drawing shops and commercial room; Wm. B. Ittner, Archt., Board of Education Bldg., St. Louis. (Lately noted.)

Tex., Denton—City voted $200,000 bonds to erect Senior High School, rebuild ward school and equip number of schools; W. G. Clarkson & Sons., Archts., Fort Worth. (Lately noted.)

Tex., Eagle Lake—Eagle Lake Independent School Dist. will erect $120,000 building; 2 stories; reinforced concrete, hollow tile and brick; Giescke & Harris, Archts., Littlefield Bldg., Austin. (Lately noted.)

Tex., Glen Rose—School Board, R. L. McAlester, Sec., will erect 1-story stone building; bids opened July 2; Huseman Co., Archt., 1008 Burk Burnett Bldg., Fort Worth.

Tex., Houston—Rice Institute, Prof. H. B. Weiser, Dean of Chemistry, will receive bids until July 6 (extended date) to erect chemical laboratory; cost $375,000; 3 stories and basement; brick and reinforced concrete; stone trim; tile roof; steam heat; electric lights; electric elevator; 16 small laboratories and research rooms, 7 classrooms, 3 lecture rooms and amphitheate, 2-story store and vault for chemicals plans and specifications at office Cram & Ferguson, Archts., 15 Beacon St., Boston, Mass., and Wm. Ward Atkins, Asso. Archt., 212 Scanlan Bldg., Houston. (Lately noted.)

Tex., Montalba—School Dist. No. 22 will erect $10,000 building. Address Dist. School Trustees.

Tex., Palestine—Cayuga School Dist. No. 29 will vote on $12,000 bonds to erect building. Address Anderson County School Board.

Tex., Silsbee—School Dist. will vote July 10 on $20,000 bonds to erect addition to high school. Address Board of Education.

Tex., Tulia—School Board will receive bids until July 23 to erect building; cost $100,000; plans and specifications at office Guy A. Carlander, Archt., Amarillo.

Tex., Vernon—City, Harry Mason, Mayor, will vote July 17 on $110,000 bonds to erect high school.

Tex., Waco—Highland Place Independent School Dist. Trustees plan to erect addition to building; 4 rooms and auditorium; election July 10 on $24,000 bonds; T. Brooks Pearson, Archt.; J. S. Beard, County Supt. of Schools, both Waco. (Lately noted.)

Va., Concord—Rustburg School Dist., J. P. Scruggs, Trustee, Concord, will erect addition to Concord School; bids opened July 3; plans at store of T. B. Scruggs & Co., Concord.

Va., Danville—City voted $350,000 bonds to rebuild Bellevue School in North Danville, improve colored schools, erect addition to junior high school, etc. Address Board of Education. (Lately noted.)

Va., Lynchburg — Brooksville Dist School Board, M. B. Hickson, Trustee, will erect 4-room addition to Fairview Heights School; bids opened July 2; Heard & Chesterman, Archts., 1004 Peoples Natl. Bank Bldg., Lynchburg.

W. Va., Morgantown—City is considering election on $1,000,000 school bonds to erect high school; accommodate 1000 pupils; swimming pool, athletic field, baseball, football and tennis grounds, running track, etc.; Chas. W. Bates, Archt., Wheeling.

## Stores.

Ala., Atmore—E. S. Liles will erect 3 brick stores on Main St. north of Curtis-Brooks Building.

Ala., Birmingham—Duncan Drug Co. will erect store at 27th St. and 7th Ave.; cost $12,750.

Ala., Florala—W. D. Patrick will erect store building on 5th Ave.

Fla., Groveland—W. H. Hunter, Clermont and J. W. Farley, Groveland, will erect brick building on Broad St.

Fla., St. Petersburg—Eastman-Kennemuth Co. will erect $10,000 store on First Ave.; 1 story; cement block.

Fla., St. Petersburg—Schooley-Murphy Co. will erect business block, Central Ave. between 7th and 8th Sts.; cost $80,000; 100x100 ft.; 2 stories; foundation for additional stories; 3 stores on ground floor; 27 offices on second; brick, steel and concrete; H. E. Wendell, Archt., St. Petersburg.

La., Baton Rouge—D. A. Schulte, Inc., New York, Geo. A. Joun, Jr., representative, Baton Rouge, leased building at Third and Convention Sts. and will remodel for shops, offices, etc.; cost $10,000.

La., Monroe—Dr. Thos. E. Wright will erect $35,000 brick store on Desirard St.; Drago & King, Archts., Monroe.

La., New Orleans—J. Hart Piano Co. will remodel building at 123 Carondelet St.; Weiss & Dreyfous, Archts., Maison Blanche Bldg., New Orleans; Ullrich Glass Co., New Orleans, are lowest bidders at $25,444.

La., New Orleans—J. B. Levert will erect store and boarding house at St. Charles Ave. and Clio St.; 3 stories; 27x120 ft.; hollow

tile and stucco; Paul Andry, Archt., 840 Gravier St., New Orleans.

Mo., Kaansas City—Louis J. Laugeson will erect business and apartment building on 34th St.; cost $30,000; 55x89 ft.

N. C., Weaverville—Dr. C. N. Sprinkle will erect drug store; cost $10,000; 2 stories; brick.

Okla., Ada—Waples-Platter Co. will erect store on Main St.; 1 story; 35x140 ft.; brick and concrete; 15,000 sq. ft. floor space.

S. C., Greenville—J. G. Davenport & Son will remodel building on S. Main St.

Tenn., Nashville—Mrs. Leslie Warner will erect $10,000 building, 177 Eighth Ave.; 1 story; brick.

Tex., Dallas—L. D. Cabell will erect store and apartment building, 4218-20 Bryan St.; cost $10,000; 2 stories; brick.

Tex., El Dorado—W. W. Wood will erect $12,000 business building on W. Cedar St.; 2 stories; brick.

Tex., Orange—Solkosky Bros. will erect $30,000 store and office building, Front and 4th Sts.; 66x144 ft.; brick; Livesay & Wiedeman, Archts., Beaumont.

Tex., West—W. R. Glasgow, Pres., West Development Co., will erect block of business build ngs to include 5 stores and postoffice building with Masonic headquarters and lodge hall on 2nd story.

Va., Richmond—Duplex Envelope Co. will erect ten 2-story brick stores at Laurel and Broad Sts.; cost $160,000.

W. Va., Charleston—Alex Carp will erect $18,000 store and apartment building at 1330 Washington St.

### Theatres.

Ark., Conway—S. G. and Theo. Smith will erect theater at N. Front and Spencer Sts.; cost $50,000; fireproof; main auditorium 65x85 ft.; Sanders & Ginnochio, Archts., Little Rock.

Fla., Groveland—W. W. Hunter, Clermont, and J. W. Farley, Groveland, will erect theater and apartment building on Broad St.; brick.

N. C., Winston-Salem—R. J. Reynolds Realty Co., Geo. W. Orr, Pres., will erect $75,000 to $100,000 theater on Church St.; 54x150 ft.; steel, brick and tile; seating capacity 1200; 2 floors for offices: (Lately noted.)

Tenn., Murfreesboro—Tony Sudekum, Nashville, purchased opera house and will remodel for theatre; cost $30,000.

### Warehouses.

Ala., Birmingham—S. J. Knecht will erect warehouse at 15th St. and 2nd Ave.; cost $15,865.

La., New Orleans—Todd Engineering Drydock & Repair Co., M. E. Hart, Mgr., will erect warehouse and shop buildings at S. Peters St. and Howard Ave.; cost $60,000; 129 ft. square on 6 ft. concrete wall and pile foundation; composition roof; steel sash and corrugated iron siding.

Miss., Starkville—Gulf Refining Co. of Louisiana will erect storage tank and warehouse.

Tenn., Clarksville—Dark Tobacco Growers' Co-operative Assn., Claude Cook, Chmn. Bldg. Comm., will erect storage warehouse; Manley & Young, Archts., Knoxville, will supervise construction. (Lately noted.)

Tenn., Memphis—Dr. O. S. McCown will erect warehouse, Butler and Tennessee St.

# BUILDING CONTRACTS AWARDED

### Association and Fraternal.

N. C., Durham—Durham Masonic Temple Assn., W. P. Budd, Chmn., Bldg. Comm., will erect 3-story and basement Temple; 60x120 ft.; reinforced concrete floors; concrete foundation; Johns-Manville built-up asbestos roof; Milburn, Heister & Co., Archts., Union Savings Bank Bldg., Washington, D. C., and Durham; Goode Construction Co., Charlotte, contr. at $110,237. Address Contr. (Previously noted.)

### Bank and Office.

Ala., Hartselle—First National Bank, will erect $20,000 building, Main St. and Bee Line Highway; brick; 31x86 ft.; 1 story; concrete floors and foundation; asphalt roof; metal ceilings and doors; vault lights. Address C. T. Dawkins, Contr., Bell Bldg., Montgomery. (Lately noted.)

Ark., Dover—Bank of Dover will erect building; Pete Huggler, Contr., Russellville.

La., Baton Rouge—Elks Theater Co., Ltd. will erect $200,000 building at Third and Florida Sts.; 4 stories; 54x128 ft.; fireproof; reinforced concrete and steel with rough faced brick; 6 stores on ground floor; 15 offices on each of other floors; composition roof; low pressure steam heat; elevators; Favrot & Livaudais, Ltd., Archts., Perrin Bldg., New Orleans; Stewart-McGehee Construction Co., Contr., Little Rock, Ark., and Baton Rouge. (Lately noted.)

Mo., Louisiana—Bank of Louisiana will erect Bedford stone and gray pressed brick bank building; marble interior finish. A Moorman & Co., Archts.-Contrs., 501 Minneapolis St., St. Paul, Minn.

Mo., Springfield—T. E. Whitlock and W. L. Garrett will erect $50,000 3-story concrete office building, St. Louis St.; W. R. Sims, Contr.; construction begun.

Tex., San Antonio—Travis—St. Marys Co., L. J. Hart, Pres., will erect 10-story fireproof office building, Travis and St. Mary's Sts.; reinforced concrete and brick; elevators; 5 stores on first floor, 178 offices above; cost about $231,000; Phelps & Dewees, Archts.; McKenzie Construction Co., Contr.; both San Antonio. (Lately noted.)

### Churches.

Ark., Nashville — Methodist Church will erect $35,000 building; A. B. Cupp, Contr., Nashville.

Md., Baltimore—German Emanuel Evangelical Church will erect $21,000 brick building, 2 Garrison Lane; 1 story; 43.6x80.6 ft.; slag roof; steam heat; E. Eugene Adams, Archt., 833 Equitable Bldg.; Cogswell-Koether Co., Contr., 406 Park Ave.; both Baltimore.

Okla., Norman—R. M. McFarlin, 340 Terrell Road, San Antonio, Tex., is interested in erection of $500,000 building; fireproof; Bedford stone; 139.8x165.10 ft.; 3 stories; steel and Carthage stone foundation; concrete and maple floors; tile or asbestos shingle roof; ornamental terra cotta; rolling partitions; steel sash and trim; R. H. Hunt Co., Archt., 1301 S. W. Life Bldg., Dallas; Holmboe Co., Contr., 424 W. 2nd St., Oklahoma City, Okla.; M. F. Fisher & Son, Norman, Okla., heating and plumbing; S. W. Electric Co., Oklahoma City, electrical work. (Previously noted.)

Tex., Austin—First Congregational Church, Rev. A. O. Stevens, Pastor, will erect $22,500 one-story and basement building, 23rd and San Antonio Sts.; reinforced concrete and brick; stone trim; asbestos shingle roof; H. F. Kuehne, Archt., 824 Littlefield Bldg.; C. W. Moore, Contr.; R. F. Bacon, 205 W. 6th St., plumbing; Austin Electrical Supply & Plumbing Co., 1808 Lavaca St., electric wiring; all Austin. (Lately noted.)

Va., Lawrenceville—M. E. Church, South Lawrenceville, will erect $30,000 Sunday school building; 2 stories and basement; brick, stone and concrete; Herbert L. Cain, Archt., 12 N. 9th St., Richmond; Harrison Construction Co., Contr., Petersburg. (Lately noted.)

W. Va., Logan—Church of Christ will erect $65,000 Gothic type building; lately noted; face brick; Indiana limestone trim; 50x85 ft.; basement, auditorium and balcony; cement and wood floors; reinforced concrete foundation; asbestos shingle roof; A. A. Honeywell, Archt., 413 Pennway Bldg., Indianapolis, Ind.; Foreman & Putnam, Contrs., Dime Savings Bldg., Marietta, O.; lighting and plumbing in general contract; sub-contracts not let. (See Mchy. Wanted—Limestone.)

### Dwellings.

Fla., Clearwater—Chas. H. Ebbetts, Pres., Brooklyn Baseball Team, Brooklyn, N. Y., let contract to erect $40,000 residence.

Fla., Fort Myers — St. Luke's Episcopal Church will erect $13,500 Spanish mission type rectory; hollow tile and stucco; contract let. Address The Rector.

Fla., Miami—C. F. Cardon will erect 2-story Spanish type residence, Indian Creek; 7 rooms and 2 baths; porches; John Pope, Contr., Miami; foundation started.

Fla., Miami Beach—Miami Ocean View Co. will erect $30,000 Spanish type dwelling, Star Island; hollow tile and stucco; hardwood and tile floors; 2 stories; tile roof; ornamental stone; interior tile; ventilators; pile and reinforced concrete foundation; garage and laundry; August Geiger & E. L. Robertson, Archts.; Jas. Batteredge & Son, Contrs.; both Miami. (Previously noted.)

Ga., Atlanta—Winship Nunnally will erect $50,000 residence, Pace's Ferry Road; Hentz, Reid & Adler, Archts.; J. L. Hiers, Contr.; both Atlanta. (Lately noted.)

Md., Baltimore—Linthicum Realty Co., 20 E. Lexington St., will erect 7 two-story frame dwellings, N. E. cor. Norfolk and Ethland Aves.; 26x32 ft.; composition roof; pipeless furnace heat; total cost $28,000; Geo. Wessel, Archt., 3001 Lyttleton Rd.; Roy C. Bopert, Contr.; both Baltimore. (Lately noted.)

S. C., Greenville—Southern Worsted Corp., B. E. Greer, Pres., Charlotte, will erect 30 operatives' dwellings; Minter Homes Co., Contr., Greenville.

Tenn., Memphis—Clyde Washburn, Hassler Shock Absorber Co., will erect $45,000 hollow tile and sandstone veneer residence, E. Parkway; 2 stories; about 75x50 ft.; oak and concrete floors; concrete foundation; Creo Dipt shingle roof; interior tile; J. Frazier Smith, Archt.; W. C. Owen & Co., Contrs., 454 Randolph Bldg.; both Memphis; heating and plumbing not let. (Lately noted.)

Tex., Port Neches—E. C. O'Neal and Wm. Meeker will erect 3 five-room bungalows; E. Conway Broun Co., Contr., Beaumont; construction begun.

### Hospitals Sanitariums, Etc.

Ala., Birmingham—Children's Hospital will erect 2-story fireproof building, 30th St. and 7th Ave., South; brick and tile; Earl Cline, Contr.

Fla., St. Petersburg—City, A. R. Welsh, Chmn., Hospital Board, will erect $76,956 hospital, 6th St. and 6th Ave., South; hollow tile and stucco; wood floors; concrete foundation; composition shingle roof; Henry

Taylor, Archt., St. Petersburg; Carmen Co., Contr., Tampa. (Lately noted.)

Ky., Dawson Springs—U. S. Veterans Bureau, Arlington Bldg., Washington, D. C., Chas. H. Stratton, Chief, Maint. & Repair Sub-Division, Room 780, will erect tile and stucco building and 4 duplex officers' quarters at U. S. Veterans' Hospital No. 79; work includes interior plaster, interior and exterior painting, excavating and concrete foundations, slate roofs, all inside plumbing, hot water heating and electric installations, necessary grading and approach work; Jas. E. Miller, Campbellsville, Ky., contr., at $97,500. (Lately noted.)

Tenn., Knoxville—Dr. H. E. Christenberry will remodel and erect addition to building, Church Ave. and Walnut St.; 3 stories; brick; cost $12,000; Manley & Young, Archts.; V. L. Nicholson, Contr.; both Knoxville.

## Hotels and Apartments

Fla., Fort Lauderdale—Dr. S. J. Clark will erect $40,000 Tarpon Hotel; 40 rooms; 3 stories; tile and stucco; Spanish architecture; store rooms or offices, lobby, dining room and kitchen on first floor; second and third floors to contain 12 two-room suites and 12 private rooms; 18 private and 6 public baths; screened balcony; Cayot & Hart, Contrs., Fort Lauderdale.

Fla., Miami—R. Earle Smith, Mgr., Smith Battery & Electric Co. will erect Dolphin Hotel, First Ave. and Tenth St.; cost $167,800; 6 stories; 90x90 ft.; 105 rooms with bath; reinforced concrete frame with tile curtain walls; E. A. Nolan, Archt.; Wolf Construction Co., Contr., both Miami. (Lately noted.)

Fla., Miami Beach—E. L. Richter will erect $30,000 apartment house on Collins Ave.; 40x65 ft.; 4 suites; also 4 garages with apartment above; Edwin G. Cobelli, Archt.; A. J. Gannon, Contr.

La., New Orleans—G. H. Fowler will erect $10,500 apartment house at Bordeaux, Dryades and Rampart Sts.; 2 stories; frame; Jno. F. Charlton, Contr., New Orleans.

Tex., Port Arthur—J. T. Pine will erect $16,000 apartment house at 5th St. and Atlantic Ave.; brick; 5-room suites; Geo. L. Faircloth, Archt., Port Arthur; W. H. McCord, Contr., Port Arthur.

Va., Norfolk—Taylor Development Co., Inc., will erect 6-family apartment building on Brandon Ave., West Ghent; 5-room suites, sun parlors and porches; brick and stone; Philip B. Moser, Archt.; Blaine Graham Construction Co., Contr., both Norfolk.

## Miscellaneous.

Ala., Selma — Clubhouse — Selma Country Club will erect $21,865 building; 2 stories; ball room, 60x35 ft.; Rutledge & Pearson, Contrs.

Fla., St. Augustine—Memorial—St. Augustine Historical Society will erect Webb Memorial; Spanish architecture; 2 stories; fireproof; tile and stucco; Chas. Hadsock, Contr., St. Augustine.

N. C., Southern Pines—Clubhouse—Southern Pines Country Club, C. L. Hayes, Chmn., will erect $50,000 building; 18-hole golf course; Aymar Embury, 2nd., Archt., 132 [illegible] Ave., New York; J. J. Stroud, Contr., Charlotte. (Lately noted.)

Tex., Beaumont—Market—I. Block will erect $100,000 market building on Liberty Ave. near Orleans Ave.; irregular dimensions, Liberty Ave., frontage 36½ ft. extending back 130 ft. from which point structure will be 68½x40 ft.; about 16,000 sq. ft. floor space; Herman Webber, Contr., Beaumont; will build 10-ft. driveway at head of Orleans Ave.

Va., Covington—Home—Home for Homeless Boys will erect building to replace Paul C. Edmunds dining hall recently burned; cost $14,861; Straughton & Mathers, Contrs., Covington. (Previously noted.)

## Schools.

Ala., Birmingham—Alabama-Southern College will erect building; cost $44,800; 2 stories; fireproof; brick and tile; Earl Cline, Contr.

Ark., Conway—Hendrix College, Dr. Jas. Thomas, Little Rock, Chmn., Board of Trustees will erect concrete and steel stadium to seat 5000; construct quarter-mile circular track and 220 straight-away track, install drainage, etc.; cost $54,500; F. L. Scull, Contr., Conway. (Lately noted.)

D. C., Washington—District Commissioners, Room 509 District Bldg., will erect addition to and alter John Strong Thomas School, 12th and L Sts., N. W.; 3 stories; cost $75,269; A. L. Harris, Municipal Archt., District Bldg.; David J. Phipps, Contr., Roanoke, Va.; rejected bids to erect cottage for Industrial Home School for colored children at Blue Plains. (Lately noted.)

Fla., Tampa—Hillsborough County Board of Public Instruction, J. E. Knight, Supt., will erect addition to high school; cost $141,377; 163x142 ft.; 3 stories; 2 wings to be connected by auditorium to seat 1250; reinforced concrete and brick; wood and concrete floors; built up roof; M. Leo Elliott, Archt.; N. W. Green, Engr.; Logan Bros., Contrs.; all Tampa. (Lately noted.)

Mo., Marionville—School Board will erect $40,000 high school; Gothic style; brick; 6 rooms and gymnasium; Earl Hawkins & Co., Archts., Springfield; Firestone & Scott, Contrs., Marionville. (Lately noted.)

Mo., Monett—Board of Education will remodel Central school; exterior finished in stucco and stone; install steam heating system; cost $25,000; Heckenlively & Mark, Archts., Springfield; M. E. Gillioz, Contr., Monett.

Mo., Trenton—Trenton School Dist. Trustees will erect high school; cost $130,000; 155x107 ft.; also erect Norton School; cost $26,876; 54x74 ft.; both structures 2 stories; brick and concrete; concrete floors with steel joist; gravel roof; concrete foundation; R. H. Sanneman, Archt., Kansas City; C. C. Ebbe, Contr., 812 McPherson St., Trenton; Cox & Co., Trenton, heating and plumbing. (Lately noted.)

N. C., Elon College—Elon College will erect Carlton Memorial building; H. B. Hunter, Archt., Burlington; J. W. Stout, Contr., Sanford.

N. C., Raleigh—School Board, 118½ W. Martin St., will erect Washington Grade and High School (colored); 2 stories and basement; 29 rooms, auditorium and shops; slow burning construction; brick; limestone or terra cotta trim; C. Gadsden Sayre, Archt., Anderson, S. C., and Raleigh; W. B. Barrow & Son, contr. at $134,080; Raleigh Iron Works, heating at $9000; Wallin & Trull, plumbing, omitting acid proof drains, at $6712; Walker Electric Co., electric wiring and conduit work, omitting program clocks and power circuit, $4097; all Raleigh. (Lately noted.)

N. C., Smith Grove—Davie County Board of Education, Mocksville, will erect school; cost $32,000; W. C. Northup, Archt., Starbuck Bldg., Winston-Salem; Boyles Construction Co., Contr., Advance. (Lately noted.)

Okla., Chickasha—Board of Education will erect 2 additional wings to Senior High School; cost $94,775; 24 classrooms; improve auditorium, gymnasium, etc.; Cowan Bros., Contrs., Chickasha and Shawnee; Cook-McDonnell Co., contr. at $22,998 for heating, ventilating and plumbing; also contr. for heating Northwest ward school for which Wilson-Daugherty Construction Co., Oklahoma City, was awarded contract at $6700 for repairs. (Previously noted.)

S. C., Charleston — School Commissioners let contract to McLaughlin Iron Works, Inc., Charleston, to install steam heating systems in Julian Mitchell and Burke Industrial schools; total cost $25,000; also let contract to G. H. Hendrickson, to construct fire resisting stairways at Mitchell School; Dawson Engineering Co., Engrs., and to Cheves-Oliver to build fire resisting stairways at Burke School; Simons & Lapham, Archts.; all Charleston; cost $12,780 and $6230 respectively.

S. C., Columbia—University of Columbia, Dr. W. D. Melton, Pres., will erect additions to Woodrow College; cost $51,875; Lafaye & Lafaye, Archts., Loan & Exchange Bldg.; J. T. Dabbs, Contr.; both Columbia. (Lately noted.)

Tenn., Beech Grove — Anderson County Board of Education, Clinton, will erect school; 73x79 ft.; brick; asphalt shingle roof; Manley & Young, Archts., Knoxville; Butcher & Maire, Contrs., Clinton.

Tenn., Crossville—Board of Education will erect school; 172x48 ft.; brick; steel sash and girders; asphalt shingle roof; Manley & Young, Archts., Knoxville; H. C. Fonda, Contr., Maryville.

Tex., Pilot Point—School Board, J. R. Windell, Sec., will erect $50,000 building; 78x104 ft.; 2 stories and basement; brick; wood floors; concrete foundation; tar and gravel roof; C. H. Leinbach, Archt., 503 Deere Bldg., Dallas; Young, Almon & Wood, Contrs., Sherman; J. H. Dodd, Dallas, heating and plumbing. (Lately noted.)

Va., Richmond—Board of Education, C. P. Walford, Clk., will erect colored elementary school, First and Eighth Sts.; Chas. M. Robinson, Archt., Times-Dispatch Bldg., Richmond; Graham Construction Co., Contr., Hampton. (Lately noted.)

W. Va., Wheeling—Board of Education will erect $60,000 addition to Triadelphia Dist. High School; brick and steel; 150x121 ft.; 1 story; Fred F. Faris, Archt.; R. R. Kitchen Co., Contr., both Wheeling.

## Stores.

Ala., Mobile—Milton Eichold will erect 1-story brick building at Jefferson and New Jersey Sts.; Harry Hamilton, Contr., Mobile.

Ala., Montgomery—Abe Kaufman, Birmingham, will expend $16,000 to remodel building at 3 Court Square for store; C. J. Harper, Contr., Montgomery.

Ark., Dover—W. H. Poynter, Sr. will erect brick business building; Pete Huggler, Contr., Russellville.

Fla., Jacksonville—W. J. Hildebrandt will erect $20,000 building on Adams St. between Davis and Lee Sts.; 2 stories; brick and stine; Geo. W. Kessler, inc., Contr.

Fla., Miami—Louis K. Liggett Co. will remodel building at 126 E. Flagler St.; Sandquist & Snow, Contr., Miami.

N. C., Asheville—Blue Ridge Grocery Co. will erect $15,000 building on Biltmore Ave.; 50x106 ft.; hollow tile and brick; [illegible] L. Merchant, Contr., Asheville.

Okla., Muskogee—Muskogee Realty Co. will erect $95,000 building; 3 stories; 120x125 ft.; brick and stone; asphalt shingle roof; concrete foundation; Chas. P. Neider, Archt., Oklahoma City; W. C. Roads, Engr.; Man-

hattan Construction Co., Contr.; O'Connor Co., heating and plumbing; Electric Service Co., electric work; Star Tin & Heating Co., structural steel; Hope Lumber Co., millwork; Builders Material Co., steel and iron; all Muskogee.

Tenn., Etowah—S. W. McKinney will erect store and office building on Tennessee Ave.: 2 stories; 42x110 ft.; brick; composition roof; Manley & King, Archts., Knoxville; Bina C. Young, Contr., Sweetwater.

Tex., Dallas—S. G. Webb, Minden, La., will erect $18,000 building at 2556-58 Elm St.; 2 stories; brick; stone trim; J. A. Pitzinger, Archt.; Inge Contruction Co., Contr., Dallas.

Tex., El Paso—Car Parts Depot Co., B. Edwin Ryan, Pres., will erect $12,000 store in 800 block Texas St.; 1 story.; brick; Anderson Construction Co., Contr., El Paso.

Tex., Port Arthur—Capt. W. C. Tyrrell will erect $30,000 business building on 5th St.; 2 stories; 50 ft. frontage; McDaniel & Hartford, Contrs., Beaumont. (Lately noted.)

Va., East Radford—McConnell & Johnson will erect business building; Painter & Hobeck, Contrs.

## Theatres.

Fla., West Palm Beach—Bijou Amusement Co., Carl Kettler, Pres., will erect $200,000 theater, Narcissus and Myrtle Sts.; Spanish architecture; concrete and steel; fireproof; contain balcony, boxes and mezzanine floor, rest rooms, smoking room, ladies' writing room etc.; Bruce Kitchell, Archt.; H. C. Daniels, Contr., both West Palm Beach. (Previously noted.)

Miss., Columbus — E. L. Kuykendall will erect $95,000 building, lately noted; to contain theatre, 2 stores and 11 offices; 82½x198 ft.; 2 stories; hollow fireproof tile; hardwood, concrete and tile floors; concrete foundation; composition roof; metal ceilings; plaster board; ventilators; ornamental terra cotta; Chas. G. Davis, Archt., New Orleans; Arthur Stansel, Contr.; G. B. Kidder, plumbing and heating; Cliff Golden, electrical work; all Columbus. (See Machinery Wanted—Building Material; Terra Cotta (Ornamental); Plaster.)

## Warehouses.

Mo., St. Louis—Endicott-Johnson Corp., Endicott, N. Y., will erect $800,000 warehouse; 150x240 ft.; 10 stories; reinforced concrete; flat slab floor construction; reinforced concrete foundation; composition roof; hollow fireproof and interior tile; metal doors; ventilators; ornamental terra cotta; rolling partitions; steel sash and trim; plans by owner; W. J. Knight & Co., Engrs., Wainwright Bldg.; R. W. Morrison Construction Co., Jno. W. Morrison, Pres., Contr., Chesnut St., both St. Louis. (Lately noted.)

N. C., Winston-Salem—Kester Machine Co. will remodel Bennett Building on Main St.; 2½ stories; 25x100 ft.; 5000 sq. ft. floor space; Frank A. Blum Co., Contr., Winston-Salem.

# MACHINERY, PROPOSALS AND SUPPLIES WANTED

**Blocks (Hat).**—See Hat Makers Supplies.

**Brick (Common).**—See Sewer and Water Works Materials.

**Bridge.**—Beaumont, Tex. Details under Construction News—Bridges, Culverts, Viaducts.

**Bridge.**—Anderson County, Anderson, S. C.—Details under Construction News—Road and Street Construction.

**Bridge Approach**—Details under Construction News—Bridges, Culverts, Viaducts.

**Building Material.**—E. L. Kuykendall, Columbus, Miss.—Building material to include ornamental terra cotta and plaster for $100,000 theater, store and office building.

**Buoys (Bell, Whistling) etc.**—Supt. of Lighthouses, Staten Island, N. Y.—Bids until July 23 for 18 bell, 2 whistling, 28 can, 24 nun buoys.

**Cars.**—Standard Sand & Gravel Corp., Lillington, N. C.—Ten good used cars, 4 to 8 cu. yds., 36-in. gauge.

**Cars (Dump).**—D. C. Elphinstone (Mchy. Dealers) 408 Continental Bldg., Baltimore, Md.—Forty 4yd., 2 way, 36-in. gauge dump cars.

**Cast Iron Fittings.**—See Sewer and Water Works Materials.

**Cement.**—Board of Awards Howard W. Jackson, Pres., Baltimore, Md.—Bids until July 11 to furnish and deliver cement; specifications with J. Reese Pitcher, City Purchasing Agent.

**Cement (Portland).**—See Sewer and Water Works Materials.

**Compensators.**—See Motors (Electric).

**Controllers.**—See Motors (Electric).

**Conduit (Vitrified Clay).**—Board of Awards, F. A. Dolfield, Register, City Hall, Baltimore, Md.—Invite bids on furnishing for the use of the Electrical Comsn., 100,000 ft. of single vitrified clay conduit; Charles F. Goob, Chief Engr., Electrical Comn., City Hall Annex, 311 St. Paul Place.

**Crane.**—See Hoisting Equipment.

**Crane (Steam or Electric).**—D. C. Elphinstone (Mchy. Dealers) 408 Continental Bldg., Baltimore, Md.—One 10 ton Gantry crane, steam or electric; state full specifications, price for resale and location for inspection.

**Creosoting and Kyanizing Equipment.**—Brown Harry Co., Gastonia, N. C.—To purchase creosoting and kyanizing equipment, second-hand.

**Culverts.**—Brazoria County, Angleton, Tex. Details under Construction News—Road and Street Construction.

**Distilling Outfits.**—O. C. Giles, 5235 Cornell Ave., Chicago, Ill.—Data on distilling outfits adapted for use of destructive distillation of pine stumps and other pine refuse; correspond with manufacturers.

**Distributing System (Electric).** — See Heating Plant, Etc.

**Distributing System (Electric).**—See Refrigerating Plant.

**Drainage.**—Harris County and Drainage Dist. No. 2, Houston, Tex. Details under Construction News—Drainage and Irrigation.

**Dredging.**—Port Commrs., Suite 200 New Court Bldg., New Orleans, La.—Bids until July 26 for hydraulic dredging from 750,000 to 1,500,000 cu. yds. in the Inner Harbor Navigation Canal between the Lock and Louisville and Nashville R. R. bridge; specifications with Supvr. of Purchases, 1 Canal St.

**Dredging.**—U. S. Engineer Office, Baltimore, Md.—Bids until July 31 to dredge Queenstown Harbor, Md.

**Feed Grinder.**—Charles E. Foote, Judge, District Court of San Juan, Porto Rico—To correspond with manufactures of a feed grinder, to grind cow peas, velvet beans, corn and salt, 3 or 4 h.p. electric motor.

**Filling (Drug) Machine.**—Rest-well Medicine Co., Inc., 509 W. Belmont St., Pensacola, Fla.—Data and prices on machine for filling cartons with powdered drugs.

**Flooring (Wood) Machine.**—See Planer, etc.

**Garage Equipment.**—H. H. Smith, Amherstdale, Va.—Complete garage equipment.

**Generator (Electric).**—Duncan Machinery Co. (Mchy. Dealers) Box 265, Knoxville, Tenn.—Prices on new or rebuilt generator, to be used in the country in the woods with a 20 h. p. portable sawmill engine that runs irregularly, with necessary equipment to run eight 50 watt lights; give list of necessary equipment.

**Gum Tape.**—F. J. Parnham, Sec., Carolina Remedies Co., Inc., Union, S. C.—To purchase gum tape direct from manufacturer.

**Hat Makers Supplies.**—Cordova Hat Co., Jacksonville, Fla.—Hat makers supplies, particularly blocks for blocking men's hats.

**Heating Plant Etc.**—Bldg. Comm. of State Hospital, Dr. Albert Anderson, Supt., Dix Hill, Raleigh, N. C.—Bids until July 10 for central heating plant, connecting mains and heating work in buildings for colony group; also separate proposal for installation of underground electric distributing system for light and power; work includes furnishing all labor, materials, tools and equipment; plans and specifications on file at office of Wiley & Wilson, Consit. Engrs., Lynchburg, Va., and office of Dr. Anderson.

**Hoisting Equipment.** — Janney & Co., Montgomery, Ala.—8 or 10 h. p. motor driven jib crane, for handling heavy pieces of cast iron weighing approximately one ton, to place in position, then breaking them for remelting in furnace; the crane to break up large iron to hoist up with quick movement an 800 lb. hammer and dropping with trip trigger and pull rope.

**Household Novelties.**—Jewelry, etc.

**Hydrants.**—See Sewer and Water Works Materials.

**Jewelry, etc.**—Farmers' Supply Stores, Box 44, Coolamon, N. S. W. Australia—Prices and catalogs from American manufacturing jewelers; also catalogs of house selling novelties.

**Jute (Oiled and Dry).**—See Sewer and Water Works Materials.

**Lathe (Automatic).**—S. O. Roberts, Shop Foremen, Inman Builders Supply Co., Inman, S. C.—Automatic lathe for turning table legs, etc.

**Lead.**—See Sewer and Water Works Materials.

**Limestone.**—Foreman & Putnam, Dime Savings Bldg., Marietta, O.—Limestone requirments for $65,000 church at Logan, W. Va.

**Locomotive.**—Standard Sand & Gravel Corp., Lillington, N. C.—Used 36-in. gauge steam saddle tank locomotive, 20 to 40 tons.

**Locomotives.**—D. C. Elphinstone (Mchy. Dealers) 408 Continental Bldg., Baltimore, Md.—Four 18 ton saddle tank, 36-in. gauge locomotives.

**Mechanical Equipment.**—Treasury Dept., Supvy. Archt.'s Office, Washington, D. C.—Bids until July 16 for repairs to mechanical equipment in the U. S. Treasury, Treasury Annex, No. 1, Butler, Winder, Auditor's and Liberty Loan Buildings.

**Mill Work.**—S. O. Roberts, Shop Foreman,

Inman Builders Supply Co., Inman, S. C.—To correspond with contractors in regard to supplying mill work.

**Miscellaneous Equipment.**—Panama Canal, A. L. Flint, Gen. Pur. Officer, Washington, D. C.—Bids until August 2 for purchase of railroad, marine construction, mechanical, electrical and miscellaneous equipment. Blank forms and information (Circ. 1525) on application to offices of Panama Canal.

**Miscellaneous Supplies.**—Panama Canal, A. L. Flint, General Purchasing Officer, Washington, D. C.—Bids until July 18 to furnish: Wire and manilla rope; brackets; metal desks and filing cabinets; boiler; gasoline tractor; engine lathe; drill presses; prepared roofing; brass, zinc; barbed wire; suction hose; asbestos gloves; pencils; carbon paper; pine, redwood and cypress lumber. Blank forms and information (Circular 1541) on application to offices Panama Canal, Asst. Purchasing Agents at 24 State St., New York, 611 Gravier St., New Orleans, La., Fort Mason, San Francisco, Cal.; U. S. Engineer offices throughout country.

**Motors (Electric).**—W. S. Austin, Consltt. Engr., Maryland Trust Bldg., Baltimore, Md.—Prices f. o. b. cars Baltimore on following 3 phase, 60 cycle, 440 volt squirrel cage motors; two 40 h. p., 720 r. p. m. with rails, pulleys and controllers; two 20 h. p. 900 r. p. m. with rails, pulleys and compensators; one 7½ h. p. 1200 r. p. m. with rails, pulleys and compensator; two 5 h. p. 1800 r. p. m. with rails and pulltys; one 1800 r. p. m. with rails and pulleys; one

**Motors (Electric).**—O. G. R. Mueller Co. (Manufacturers Agents) Brown-Marx Bldg., Birmingham, Ala.—One 100 h. p. slip ring motor, 3 phase, 60 cycle, 2200 volt, 600 to 1200 r. p. m. also one 30 or 35 h. p. slip ring motor, 3 phase, 60 cycle, 2200 volt, 900 to 1800 r. p. m. both to be complete with controller, rails, pulley and starter; if used equipment state condition, guarantee, terms, location and time of shipment; also state if price includes resale commission.

**Paving.**—City of Abilene, Tex. Details under Construction News—Road and Street Construction.

**Paving.**—City of Richmond, Va. Details under Construction News—Road and Street Construction.

**Paving.**—City of Troy N. C. Details under Construction News—Road and Street Construction.

**Paving.**—City of Atlanta, Ga. Details under Construction News—Road and Street Construction.

**Paving.**—City of Graham, Va. Details under Construction News—Road and Street Construction.

**Paving.**—Town of Dora, Ala. Details under Construction News—Road and Street Construction.

**Paving, etc.**—Town of Rutherfordton, N. C. Details under Construction News—Road and Street Construction.

**Paving, etc.**—City of Huntington, W. Va. Details under Construction News—Road and Street Construction.

**Pipe (Cast Iron or Steel).**—Ryan Engineering Co., Arcade Bldg., Columbia, S. C.—Any quantity up to approximately 15,000 ft. of 8-in., used, cast iron or steel water pipe; state price per foot, f. o. b. shipping point, location, class, kind of joint, condition and quantity.

**Pipe (Sewer).**—See Sewer and Water Works Materials.

**Planer.**—E. S. Ferd, Louisburg, N. C.—To purchase planer for lumber mill.

**Planer, etc.**—R. P. Johnson (Mchy. Dealer) Wytheville, Va.—New or secondhand heavy planer, especially built to make hard wood flooring with end matcher attachment; or a flooring machine.

**Plaster.**—E. L. Kuykendall, Columbus, Miss.—See Building Material.

**Pressed Steel Parts.**—H. M. Shaw, Oxford, N. C.—To purchase in quantities special pressed steel parts; drawings on application.

**Pulleys.**—See Motors (Electric).

**Pumping Plant.**—Carroll County Drainage & Levee Dist. No. 1, H. P. Greison, Sec., Savanna, Ill.—Bids until July 21 for oil engine driven pumping plant containing a 30-in. double suction centrifugal pump; also bids received on building to house plant; Elliott & Harman Engineering Co., Engrs., Peoria, Ill.

**Punch and Shear.**—Carey Machinery & Supply Co., 119 E. Lombard St., Baltimore, Md.—To purchase quadruple punch and shear 15-in. throat, 30-in. throat on shearing end, splitting shear right to left 18-in. long, capacity of punch 1-in. through 1-in., shear 6x¾-in.; type formerly manufactured by Smith Bros. Co.

**Refrigerating Plant.**—R. S. Busbee, Chmn., Bldg., Comm., State School for Blind, Raleigh, N. C.—Bids until July 5 at office G. E. Lineberry, Supt., Raleigh, for installation of ice making and refrigerating plant and construction of cold storage boxes, also separate proposals for installation of electric distributing system, outside lighting; plans and specifications at office G. E. Lineberry, and at office Wiley & Wilson, Consltt. Engrs., Lynchburg, Va.; obtainable from Wiley & Wilson.

**Road.**—Medina County, Hondo, Tex. Details under Construction News—Road and Street Construction.

**Road.**—Smith County, Tyler, Tex., will build 3 roads. Details under Construction News—Road and Street Construction.

**Road.**—State Highway Dept., East Point, Ga. Details under Construction News—Road and Street Construction.

**Road.**—Brazoria County, Angleton, Tex.—Details under Construction News—Road and Street Construction.

**Road.**—Anderson County, Anderson, S. C. Details under Construction News—Road and Street Construction.

**Road.**—Polytechnic Institute, Blacksburg, Va. Details under Construction News—Road and Street Cnstruction.

**Road.**—State Dept., of Highway and Public Works, Nashville, Tenn. Details under Construction News—Road and Street Construction.

**Road Roller.**—Southern States Equipment Co., (Mchy. Dealers) 712 Canal-Commercial Bldg., New Orleans, La.—7 ton, 3 wheel gasoline road roller.

**Sewer.**—City of Graham, Va. — Details under Construction News—Road and Street Construction.

**Sewer and Water Works Materials.**—City of Fairmont, N. C.—Opens bids July 2 to furnish following material for construction of sewer system and extension to water works; 4272 ft. of 6-in. B. & S. pipe, class B; 1.5 tons cast iron fittings; 10 standard 2-way hydrants for 3 ft. ditch; five 6-in. gate valves and boxes; two 1½-in. Scd. gate valves and boxes; 4100 lbs. virgin pig lead; 2000 lbs. oiled jute; thirty 5/8-in. corporation cocks and lead goose necks; 6195 ft. of 12-in. sewer pipe; 4600 ft. of 8-in. sewer pipe; 160 of 6-in. sewer pipe; necessary sewer pipe specials; twenty seven 300 lb. and two 200 lb. manhole rings and covers; 100 manhole steps; 3 automatic flush tank syphons; 27,000 all hard common brick; 140 bbls. Portland cement; 5000 lbs. reinforcing steel; 50 tons crushed stone or washed gravel; 50 cu. yds. sand; 950 lbs. dry jute; H. G. Mitchell, Mayor; J. B. McCrary Co., Engr., Atlanta, Ga.

**Shovel (Steam).**—E. N. Stokes, Bisbee Bldg., Jacksonville, Fla.—To rent steam shovel, crawler type with ¾ yd. dipper; state full details, location, condition and rental charge.

**Shovels.** — D. C. Elphinstone (Mchy. Dealer) 408 Continental Bldg., Baltimore, Md.—One 2½ yd. dipper steam shovel; one Erie type B. shovel, crawler or wheels.

**Springs (Bed).**—C. M. McBride, 823 Forrest Drive, Hagerstown, Md.—To correspond with manufacturers of bed springs.

**Sprinkling (Fire) System.**—D. H. Banks, St. Matthews, S. C.—Data and prices on fire sprinkling system for cotton warehouse, 1 story brick building about 50x150-ft.

**Steel (Reinforcing).**—See Sewer and Water Materials.

**Stone and Gravel.**—See Sewer and Water Works Materials.

**Street Improvement.**—City of Laurel, Miss. Details under Construction News—Road and Street Construction.

**Street Improvement.**—City of Martin, Tenn. Details under Construction News—Road and Street Construction.

**Terra Cotta.**—E. L. Kuyendall, Columbus, Miss.—See Building Material.

**Transmission Line.**—Town of Whitakers, N. C.—Details under Construction News—Electric Light and Power Plants.

**Valves and Boxes.**—See Sewer and Water Works Materials.

**Wall.**—Annapolis Water Co., Wm. H. Moss, Pres., Annapolis, Md.—Bids until July 9 to construct reinforced concrete wall containing approximately 250 cu. yds. concrete, 3570 lbs. of steel reinforcing together with all necessary excavation, back fill and incidental work.

**Wheels (Water).**—W. J. Ore, Jefferson City, Tenn.—To correspond with manufacturers of wheels or motors for water power; wish to develop steam with about 50 ft. fall and flow of 1000 to 1500 gals. per min.; data on good wheel system.

**Woodworking Equipment.**—See Lathe (Automatic).

# Financial News

## New Financial Corporations.

Ala., Montgomery—Dixie Life Assn., capital $25,000, incorporated by C. C. Dodson, C. F. Renner, A. A. Wilson.

Fla., Daytona—Halifax Bond & Mortgage Co., capital $10,000, incorporated with David Sholts, Pres.; Alfred A. Green Sec.-Treas.

Ga., Albany—Albany Loan & Finance Co., capital $50,000, incorporated with D. Owens, Pres.

Ky., Murray—Dr. Henslee and others interested in establishing bank.

La., New Orleans—Moore-Hymans & Co., Inc., capital $100,000, chartered with Robert Moore, Pres.; Chapman H. Hymans, 3rd., Sec.

Md., Baltimore—C. F. Delmar & Co., Lexington Bldg., and H. A. Evans, Charles Street Ave. and 38th St. are promoting organization of American Bank & Trust Co., capital $7,500,000.

Miss., McComb—McComb Building & Loan Assn., capital $100,000, incorporated by T. E. and F. B. Enochs, W. E. Drew.

Mo., Perryville—Perry County Agricultural Credit Corp., capital $20,000, incorporated by L. A. Herbst, R. C. Williams, J. H. Kiesler.

Mo., St. Louis—Wm. T. Comstock & Co., capital $25,000, incorporated by J. E. Dow, A. J. Klanke, W. T. Comstock.

Mo., St. Louis — The People's Finance Corp., capital $100,000, incorporated by C. E. Herriott, G. W. Buckner, E. L. Harris.

Mo., St. Louis—Commerce Co., capital $1,000,000, incorporated by John G. Lonsdale and others.

N. C., Cerro Gordo—Truckers Bank and Trust Co. organized to take over stock and deposits of Bank of Cerro Gordo.

S. C., Anderson—Robert Driver, E. L. Cunningham and others interested in organizing industrial bank, with capital stock of $100,000.

S. C., Columbia — Carolina Brokerage Corp., capital $10,000, incorporated by L. B. and H. L. Phillips.

S. C., Columbia—B. H. Lumkin Insurance Agency, Inc., incorporated with B. H. Lumkin, Pres.; Francis H. Lumkin, Sec.

S. C., Greenville—Greer Bank & Trust Co., capital $100,000, organized with E. C. Bailey, Pres.; C. L. Cobb, V. P.; formed by merger of Bank of Greer and Farmers' Bank & Trust Co.

Tex., Dallas—Fidelitty Finance Corp., capital $100,000, incorporated by W. B. Head, James C. Griffin, C. L. Cox.

Tex., Dallas—Atlantic Mortgage & Investment Co., capital $10,000, incorporated by L. Elzey, J. N. Touchstone, N. Diamond.

Tex., Fort Worth—Southwestern Stock Exchange, Inc., capital $500,000, incorporated by C. C. Griffith, H. E. Evans, A. E. Breeding.

Tex., Houston — Link-Ford Co., capital $100,000, incorporated by J. W. Link, R. W. Ford and others.

Va., Lynchburg—Mutual Building & Loan Assn., capital $3,000,000, incorporated with Richard Hancock, Pres.; K. D. Scott, Sec.-Treas.

Va., Norfolk—Highland Investment Corp., capital $50,000, chartered with Benjamin Margolius, Pres.; Edward J. Hecht, Sec.

Va., Potomac—Potomac Trust Co., capital $25,000, organized with J. C. Ellis, Pres.; P. J. Conlon, V.-P.; Jas. P. Casbarian, Cashier.

Va., St. Paul—Bank of St. Paul, capital $100,000, incorporated with J. S. Lasnick, Pres.; F. T. McGlinchy, Sec.

W. Va., Clarksburg—State League of Mutual Building & Loan Assns., cap'tal $10,000, incorporated by Truman J. Lynch, Clarksburg, E. L. Morrison, Charleston, W. Va., Edward F. Deihl, of Wheeling, W. Va.

## New Securities.

Ala., Falkville—Schools—City, R. A. Summerford, Mayor, will sell $9000 6% 10-yr. $1000 denom. bonds at private sale about Aug. 1.

Ala., Tuscaloosa — Schools — City voted $500,000 bonds. Address The Mayor.

Ark., Newport—Road—Jackson County receives bids until July 2 for $72,000, 6% 20-yr. bonds. Address T. L. Mason, First National Bank, Newport, Ark.

Ark., Newport—Street—City receives bids until July 2 for $77,000 bonds of Street Improvement Dist. No. 7; L. L. Bowen, Sec. of Dist.

Fla., Bradentown—Road and Bridge—Manatee County sold to Otis & Co., Cleveland, Ohio, $55,000 of 6% bonds, at $52,800; Robt. H. Roesch, Clk. (Lately noted.)

Fla., Bunnell.—Road.—Flagler and Volusia Counties will vote July 10 on $450,000 bonds. Address County Commrs.

Fla., Delray—Schools—Special Tax School Dist. No. 6 will vote July 17 on $30,000 bonds; Agnes Ballard, Sec., Palm Beach County Board of Public Instruction, West Palm Beach.

Fla., Fort Pierce—Inlet—Town voted $220,000 bonds; Address Inlet Commrs. (Lately noted.)

Fla., Lake Worth—Schools—City will vote soon on $20,000 bonds. Address Board of Public Instruction.

Ga., Buena Vista—Schools—City voted $30,000 bonds; Roland B. Daniel, Supt. of Education.

Ky., Frankfort—Schools—City voted $125,000 bonds. Address The Mayor.

La., Hammond — Water-Works Equipment—City will receive bids until July 17 for $40,000, 5% bonds. Address C. C. Carter, Mayor.

La., Houma—Improvement—City will receive bids until August 8 for $60,000 bonds; H. M. Bourg, Mayor.

La., Mansfield—Road—De Soto Parish contemplates $1,000,000 bond issue. Address Police Jury.

La., New Roads—Schools—Pointe Coupee Parish School Board, A. McFarland, Sec., will receive bids until July 31 for $100,000 5½% bonds; 500 denom.

Md., Ellicott City—Road—Howard County Commrs. sold to Alexander Brown & Sons, Baltimore, $240,000, 4½% bonds, at $1030.93 per $1000. (Lately noted.)

Miss., Meridian—Paving, Sewerage—City sold $144,247 bonds to Sidney Spitzer & Co., Toledo, Ohio, at par, accrued interest and a premium of $4760.

Miss., Vicksburg—Seawall—City sold $125,000, 5¼% bonds, at premium of $125,000 plus accrued interest to City Savings & Trust Co., People's Savings Bank and American Bank & Trust Co.

Mo., Independence—Road, Bridge and General Revenue Fund—Jackson County issued $150,000 tax anticipation notes; will sell. Address J. H. Fayman, County Treas.

Mo., Joplin—Memorial Hall—City, Taylor Snapp, Mayor, will vote July 24 on $250,000 bonds for memorial hall and site.

Mo., Kahoka—Sewer, Water, Streets—City votes July 10 on $93,000 bonds. Address The Mayor.

Mo., Monroe City—Schools—City voted $75,000 bonds. Address The Mayor.

N. C., Belmont—Schools — Belmont Dist. School Trustees, S. C. Stowe, Sec., will receive bids until July 5 for $30,000 6% bonds.

N. C., Fayetteville—Schools and Roads—County Commrs., C. C. Howard, Clk., sold $75,000 6% school bonds at $80,405 to National Bank of Fayetteville; also sold $210,000 5% road and bridge bonds to Hill, Janier and Illinois Merchants Trust Co., Chicago.

N. C., Fayetteville—Courthouse and Jail—Cumberland County will probably issue bonds to erect courthouse and jail. Address County Commrs.

N. C., Greensboro—Street, Water Works—City sold $1,000,000, street and $300,000 water bonds, 5 per cent interest at par and premium, to a syndicate composed of following: Kauffman, Smith, Emert & Co., St. Louis, Mo.; A. B. Leach & Co., New York, and Chicago; Detroit Trust Co., Detroit; Mississippi Valley Trust Co., St. Louis; Illinois Merchants' Trust Co., Chicago. (Lately noted.)

N. C., High Point—Improvement and Refunding—City sold $834,834, 5¼% bonds to Commercial National Bank, High Point, at par, accrued interest and premium of $834; R. L. Pickett, City Mgr. (Lately noted.)

N. C., Lowell—Schools—Lowell Dist. School Trustees, T. P. Rankin, Sec., will receive bids until July 5 for $25,000 6% bonds.

N. C., Macclesfield—Electric Light and Power—Town will receive bids until July 16 for $8500 of 6 per cent semi-annual bonds; D. F. Batts, Town Clk.

N. C., Marion—Courthouse — McDowell County Board of Commrs., J. L. Lackey, Chmn., will receive bids until July 9 at courthouse for $60,000 bonds; bids requested at 5%, 5¼%, 5½% and 6% rates.

N. C., Ranlo—Schools—Ranlo Dist. School Trustees, Jno. A. McFalls, Sec., will receive bids until July 5 for $30,000 6% bonds.

N. C., Roxboro—Road—Person County sold $15,000 bonds at a premium of 5%. Address M. R. Long, Chmn., Central Highway Comn. (Lately noted.)

N. C., Shelby—Street—Town contemplates $35,000 bond issue; Mrs. Oscar M. Suttle, Clk. of Board of Aldermen.

N. C., Stanley—Schools—Trustees, Graded School Dist. No. 1, J. G. Rutledge, Sec., will receive bids until July 5 for $10,000 bonds.

N. C., Washington — Schools—Pantego School Dist., No. 6, C. P. Aycock, Sec., will receive bids until July 20 for $25,000 bonds; bids for 5½, 5¾ and 6% bonds.

Okla., Holdenville—School—City voted $25,000 bonds. Address The Mayor.

S. C., Camden—Street and Sewer—City contemplates voting on $95,000 bonds, including $85,000 for streets and $10,000 for sewers. Address The Mayor.

S. C., Cheraw—Paving—City voted $200,000 bonds. Address The Mayor. (Lately noted.)

S. C., Gaffney—Schools—Cherokee County sold to Lowery Bank & Trust Co., Atlanta, Ga., $19,210 bonds as follows: Kings Creek Dist. No. 4, $5000; Ashworth No. 33, $5000; Corinth No. 29, $5000; Gowdeysville No. 22, $4000; W. C. McArthur, Co. Supt. of Education.

S. C., Greenville—Road—Greenville County will vote July 24 on $600,000 bonds. Address County Commrs.

S. C., North Charleston—Schools—School Dist. No. 4, C. E. Lepley, Chmn., is considering $75,000 bond issue.

S. C., Seneca.—Paving—Town voted $48,000 bonds. Address The Mayor. (Lately noted.)

S. C., Spartanburg — Street, Park, Fire Building and Equipment—City contemplates $500,000 bond issue. Address Mayor Floyd.

Tenn., Trezevant—Water and Light—City voted $35,000 bonds. Jeff J. Blanks, Mayor. (Lately noted.)

Tex., Cleburne—Road—Johnson County, Venus Dist., will vote July 21 on $40,000 bonds. Address County Commrs.

Tex., Dale—Schools—Dale School Dist. voted $8000 bonds. Address Dist. School Trustees.

Tex., Denton—Schools—City voted $200,000 bonds. Address School Board.

Tex., Lubbock—Schools—Lubbock Independent School Dist. voted $80,000 bonds; C. E. Maedgen, Sec., School Board.

Tex., Montalba—Schools—School Dist. No. 22 voted $10,000 bonds. Address Dist. School trustees.

Tex., Palestine—Schools—Gayuga and Bethel School Dists. will vote on $12,000 and $6500 bonds. Address Anderson County Board of Education.

Tex., Salmon—Schools—School Dist. No. 41 voted $4000 bonds. Address Dist. School Trustees.

Tex., Silsbee—Schools—School Dist. will vote July 10 on $20,000 bonds. Address Board of Education.

Tex., Tennessee Colony—Schools—School Dist. No. 21 voted $8000 bonds. Address Dist. School Trustees.

Tex., Tulia—Schools—City voted $100,000 bonds. Address The Mayor.

Tex., Vernon—School—City, Harry Mason, Mayor, voted $110,000 bonds.

Tex., Waco—Schools—Highland Place Independent School Dist. will vote July 10 on $24,000 bonds; J. S. Beard, County Supt. of Schools, Waco.

Va., Danville—Sewers and Schools—City voted $50,000 sewer bonds and $350,000 school bonds. Address The Mayor. (Lately noted.)

Va., Norfolk—Water—City sold to Kissell-Kennicutt Co., of New York, $410,000, 5% bonds at premium of $19,024.

Va., Wise—Detention Home—Wise County voted $100,000 bonds for detention home for wayward girls.

W. Va., New Martinsville—Road—Wetzel County, Grant Dist., voted to issue bonds. Address County Commrs.

## Financial Notes.

American Industrial Investment Co., Col. R. M. Johnston, Pres., Houston, Texas, will increase capital $250,000.

Automobile Finance Co., Galveston, Tex. increased capital from $250,000 to $500,000.

Beaver Dam Deposit Bank, Frankfort, Ky. increased capital from $25,000 to $50,000.

Carter County Bank, of Van Buren, Mo. acquired Bank of Hunter.

Charleston Trust Co., Charleston, W. Va., changed name from Elk Banking Co.

First Bond & Mortgage Co., Orlando, Fla. increased capital from $500,000 to $750,000.

First National Bank of Sapulpa, Okla., will reorganize.

First State Bank of Blanchard, Blanchard, Okla., increased capital from $10,000 to $25,000.

Independent Mutual Life Insurance Co., 421 St. Paul St., Baltimore, Md., has increased capital from $10,000 to $15,000.

Merchants & Farmers Bank, Statesville, N. C., increased capital from $25,000 to $100,000.

Mutual Building & Loan Assn., Sam B. Cook, Pres., Jefferson City, Mo., will increase capital from $750,000 to $1,000,000.

Sapulpa Building & Loan Assn., Sapulpa, Okla., increased capital from $1,250,000 to $1,750,000.

Supreme Finance Corp., Richmond, Va., increased capital from $25,000 to $200,000; changed name from Richmond Kline Co.

The Cherokee Building & Loan Assn., Oklahoma City, Okla. increased capital from $250,000 to $500,000.

## Trade Literature.

### Advantages of Diesel Power Plants.

A recent issue of "Oil Engine Power" contains a reprint of an article by Stanley Wright entitled "Oil Engine or Steam Power," for the Busch-Sulzer Bros. Diesel Engine Co., of St. Louis, Mo. The article makes a general comparison of the simplicity of a Diesel plant with a typical steam station, accompanied by observations on relative costs of operation and on results obtained in combined steam and Diesel plants. Besides, the advantages of Diesel engines for stations up to 5000 K. W. capacity are outlined in the article, which is finely and fully illustrated.

### Magnetic Separator Pulleys.

High Intensity Magnetic Pulleys for removing iron and steel from material conveyed upon belts are described and pictured in Bulletin No. 25-P of the Dings Magnetic Separator Co., of Milwaukee, Wis. This publicafion is liberally illustrated and one of the pictures shows six men suspended from an iron rod which is held aloft only by the magnetism of the pulley. Another man in the group is hanging head downward and it is stated that his only support is the attraction of the pulley for the iron in his shoes. Another of the pictures shows how the magnetic pulley separates iron or steel from a mass of material passing over it on a belt. There are sundry other illustrations of installations of these pulleys and their service.

### Economy of Sand Blast Apparatus.

Two new bulletins on sand blast have been recently issued by the American Equipment Company, Incorporated, 366 Madison Ave., New York. Bulletin No. 534 relates to sand blast barrels for economically cleaning castings, forgings, etc., and it describes apparatus of both the pressure type and the gravity type, giving classes of work for which each is especially suited. Tables are included to give sizes, weights and dimensions. Bulletin No. 536 relates to automatic rotary tables and describes apparatus in which a continuously revolving table carries the pieces to be cleaned of sand, scale or of oil, through a blast of sand or grit. This type of apparatus, it is noted, is very economical for certain kinds of work and is therefore of interest to many foundrymen. The bulletins are illustrated.

### Rapid Method of Building Construction.

Several very interesting and instructive publications have been issued by the Truscon Steel Company, of Youngstown, Ohio, describing and illustrating the Truscon-I Construction which it is stated, is a series of I-beams with the top flange sheared to form rigidly connected diagonals extending into the concrete above. Thus the Truscon-I's are made integral with the concrete, producing a unit of reinforced concrete beam and slab. A complete system of removable steel forms which are suspended from the I's is provided. Therefore, the I's serve the double purpose of providing supports for the forms until the concrete is set, and of rigid reinforcement for the completed reinforced concrete structure. This method of building construction, it is further remarked, results in speeding up work. The pictures show just how the I's function, while other illustrations show completed structures. A book giving the load tests conducted by several leading institutions, together with pictures, completes the series of publications.

### Doors of Wood and Steel.

Doors for industrial buildings are described and pictured in a new catalogue issued by the J. G. Wilson Corporation, 11 East Thirty-Sixth St., New York City, with factories at Norfolk, Va. and Los Angeles, Calif. They make rolling doors of steel and wood which have been in use for many years and their new products are horizontal folding doors of steel and wood, and fireproof air chamber doors of sliding and swinging types, all of which are described in the book so as to display their construction as well as their functions. The first Wilson doors were installed in 1876.

### Advantage of Oil Fuel in Power Plants.

A booklet, "Oil Burning in Power Plants," issued by the National Airoil Burner Company, Incorporated, 9th and Thompson Sts., Philadelphia, Pa., gives a description in non-technical language of the system usually installed in the average power plant and Page 21 carries a concise statement covering the comparative costs of operating a power plant by fuel oil and coal. The oil burners and oil burning equipment which this company manufactures are also used extensively in metallurgical clay burning plants and in the glass and other industries. The booklet is finely printed and illustrated.

### Vitrified Clay Pipe and Tile.

A recent addition to the publications of the W. S. Dickey Clay Mfg. Co., Kansas City, Mo., is a book of more than 50 pages entitled "Vitrified Clay Culvert Pipe and Drain Tile," which is beautifully prepared and illustrated. It deals with the general subject of good materials being essential for the construction of good roads and one of the many interesting pictures is that on Page 3 showing part of the Dixie Overland Highway in Muscogee County, Ga., which is provided with vitrified pipe ditch relief culverts. There are also other illustrations of work done in the South with such materials. A great deal of information of value to road engineers and contractors will be found in the book.

### Tobacco Curing Furnace.

An illustrated catalogue of the Johnson patent tobacco curing furnace has been issued by the Southern Iron & Steel Corporation, O'Hanlon Building, Winston-Salem, N. C. This furnace accomplishes a new and improved method of tobacco curing, it is noted, one which it is stated will meet all requirements, the results of its use being reliable and profitable. The No. 1 furnace of this type is 28 inches high, 20 inches wide and 52 inches long and burns wood in sticks of 3 feet long. The shipping weight of the furnace is 650 pounds. The catalogue contains complete descriptions with pictures and diagrams that show just how the furnace operates.

### Water Service Heaters and Converters.

Patterson Hot Water Service Heaters are fully described and illustrated in the latest general catalogue published by the Patterson-Kelly Co., Incorporated, 101 Park Ave., New York, which covers the Patterson converters as well as the heaters for all industrial and domestic service requiring hot water. The book contains many tables of sizes and clearances besides steam conversion tables, by the use of which any prospective purchaser may gather intelligible information concerning any heater which he may need. The catalogue is finely printed and the pictures are all of a superior character.

### New Electrical Supply Catalogue

The Westinghouse Supply Catalogue is now being distributed. This issue for 1923-24 supersedes all similar catalogues heretofore issued by the company. The improvements which it embodies are largely matters of detail and refinement. The book is indexed according to subjects and to sections, besides having a style number and a thumb index. There is also a classified index bearing the title "How This Catalogue Serves." Here is listed apparatus of particular interest to central stations, electric railways, industrial plants, mines, contractor-dealers and architects. The catalogue also contains the announcement of the opening of a new plant at Homewood, Pa., this to be devoted exclusively to manufacturing, repair and renewal parts for Westinghouse apparatus in service but no longer strictly standard. The catalogue is a large volume, 1300 pages being devoted to its contents.

### Complete Treatise on Oil Burning.

A fine illustrated book issued by the Combustion Engineering Corporation, manufacturers of mechanical stokers and furnace equipment, Combustion Engineering Bldg., Broad St., New York, is described as "a complete treatise on the subject of oil burning." It begins by presenting several interesting articles relative to the properties, specifications, advantages and supply of fuel oil. These articles are following by a complete illustrated description of the recently acquired Quinn oil burner. Next comes an article on the operating and equipment cost of oil as compared with coal, which in turn is followed by articles on important points to be considered in the installation of an oil burning system, on the design of furnaces for oil burning, and on the combustion of fuel oil, respectively. In the middle of the book is shown a complete test of the corporation's oil burners, which was made in the boiler plant of a large oil refinery.

### Value of Steel Paving Guards.

A neat little folder with a legal air to it is issued by the W. S. Godwin Company, Inc., 12 East Lexington St., Baltimore, Md., concerning their steel paving guards. It is entitled "Proof: In the Case of Paving vs. Traffic, et al. In the Court of Technical Opinion and Practical Use." The contents, which are illustrated, consist of letters of appreciation and approval from road department officers, engineers, and others testifying to the excellent service given by these guards which are applied along street railway tracks on improved highways and also along the edges of improved road surfaces to keep them in condition. They are similarly used on city streets, the pictures showing applications of them in both urban and suburban territories.

### Valuable Information on Rope.

Yellow Strand "Powersteel" Rope is the subject of a circular issued by the Broderick & Bascom Rope Co., of St. Louis and Seattle, with eastern office and warehouse at 76 Warren St., New York, under the management of C. A. Dunlavy. This rope is described as being "stronger than any other steel rope of equal flexibility and elasticity ever made." Each wire, it is stated, has a tested tensile strength of from 240,000 to 260,000 pounds. Another product of the company, "Rope-A-Lene," is described in a little folder. It is a wire rope preserver which is claimed to save ropes and money.

# INDUSTRIAL NEWS OF INTEREST

Items of news about industrial, railroad or financial interests, building operations, construction work, municipal improvements, or the sale of machinery or the letting of contracts in the South or Southwest, are invited from our readers whether they are advertisers, or subscribers or not. We invite information of this character from readers in the North and West about their Southern business operations, as well as from Southern readers. News of value will be published just as readily when from non-advertisers as from advertisers.

### New Source of Calcium Arsenate Supply.

It has been announced that the long expected production of calcium arsenate from the Salt Lake Insecticide Co. is now on the market and that the company is already shipping regularly on a carload basis to the cotton states of the South, an additional limited tonnage being therefore available for fighting the boll weevil. The manufacture of this product is under the direction of Dr. Frank K. Cameron, who was for many years connected with the Department of Agriculture and who has perfected a process for producing the highest grade of calcium arsenate directly from the oxidized arsenical ore deposits controlled by the company and it is stated that the unique feature of this production is that the operating cost is not controlled by the white arsenic market. The distribution of the company's product has been placed in the hands of Howard W. Ambruster, 261 Broadway, New York, as exclusive sales agent.

### Rapid Repair for Concrete Floors.

"Quickfix," a new compound for repairing concrete floors, and that will produce a patch of flint-like hardness in 48 hours, it is stated, has recently been developed by the Master Builders Company, Cleveland, Ohio. When used according to the specifications prescribed by the manufacturers it is claimed that this compound will produce permanent patches in concrete that can be used two days after installation, this contrasting with a two or three weeks period heretofore needed for concrete patches to harden. This will therefore be appreciated by the maintenance departments of industrial plants which, by reason of increased use of steel wheeled trucks and trailers have suffered disintegration of floors over which interior traffic moves. The installations of this new product can, it is stated, be made by any handy man not necessarily skilled in handling concrete, merely by following directions, as it speeds the hydration of the cement. Thus, interference with use of floors is largely eliminated. The cost is said to be less than two cents a foot for the use of this new compound.

### Large Bond Offering.

According to announcement in another column Halsey, Stuart & Co., Inc., of New York and Chicago; George H. Burr & Co., of the same cities; and the Lacey Securities Corporation of Chicago, are offering to the public $7,500,000 of 1st mortgage, 6 per cent sinking fund gold bonds, Series B, of the Long-Bell Lumber Co., dated April 1, 1923 and maturing twenty years later, the securities being issued in denominations of $1000, $500, and $100. Further particulars will be found in the advertisement.

### Division Manager Appointed.

T. E. Geiger, formerly with Hobart Bros. Company, Troy, Ohio, has taken over the management of the low voltage division of the Ideal Electric & Mfg. Co., Mansfield, O., manufacturers of direct and alternating current power apparatus, and he will cover the supervision and managing of their products for the electro-plating, storage and battery recharging and other industries.

### Now In New Quarters.

Manning, Maxwell & Moore, Inc., removed on July 1 to the Pershing Square Building, 100 East 42nd street, New York, according to announcements which have been sent out by the organization.

### Industrial Plant to Be Sold.

Announcement is made elsewhere in this issue that the entire plant of the Tozier Engine Works and Machine Shops at Columbia, S. C., is being offered for sale. I. M. Mauldin, care of Palmetto National Bank in that city may be addressed. Further particulars appear in the advertisement.

### Birmingham Office Opened.

The Lehigh Portland Cement Co., of Allentown, Pa., has opened a Southern office in the Woodward Building, Birmingham, Ala., according to the company's announcement which appears on another page of this issue. The company has sixteen plants forming a chain from the Atlantic to the Pacific coast.

### Steel Device for Airing Mattresses, Etc.

The A. G. Leake Erecting Company, Incorporated, Bridgeport, Conn., have issued several illustrated folders relative to their mattress Aerator for hotels, hospitals, etc., This is a mechanical device for holding a mattress so that it will be exposed to air and sunshine on all sides. Pillows and bed clothing may also be aired simultaneously by hanging them from the top and the sides of the Aerator which is strongly made of steel that has been hot galvanized so that it will not rust. It is self supporting and will stand anywhere. It has four mattress containers.

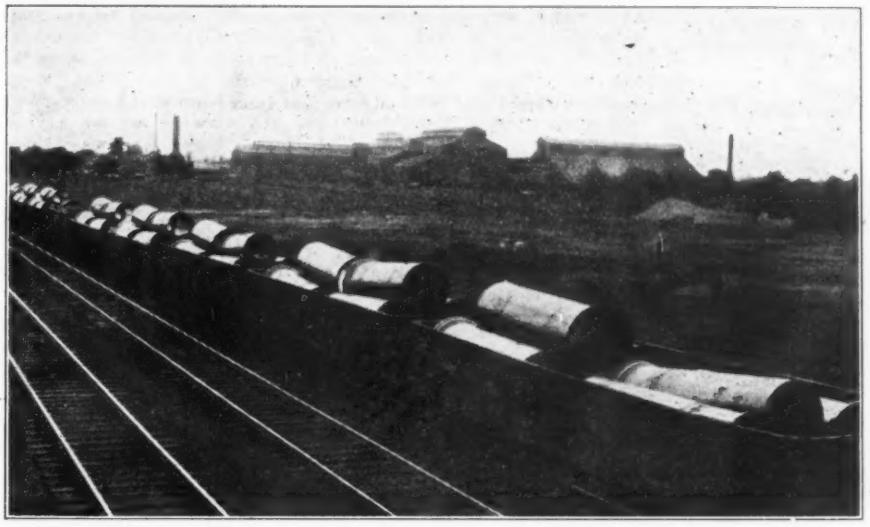
### Elected to Massachusetts "Tech."

Dr. W. R. Whitney, director of the Research Laboratory of the General Electric Company, was recently elected a member of the corporation of the Massachusetts Institute of Technology for a term of five years. He was graduated from the Institute in 1890 and has for some time been a non-resident professor of theoretical chemistry at the institution. Walter Humphreys, '97 of Brookline, and Charles R. Maine, '09, a prominent consulting engineer of Boston were also elected to the corporation, these three succeeding Paul W. Litchfield, Arthur D. Little and Eben S. Stevens.

### William E. Manning.

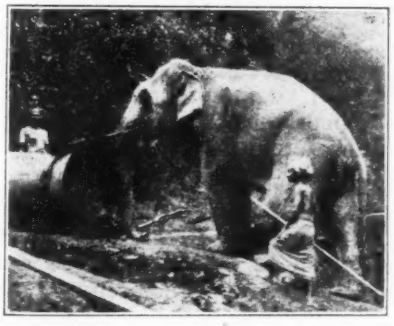
William E. Manning, vice-president in charge of sales for the Youngstown Sheet & Tube Co., of Youngstown, Ohio, died on Friday, June 15 in the 53rd year of his age. Mr. Manning was among the first members of the company's organization, having been made assistant manager of sales in 1903. Later he became sales manager and still later one of the vice-presidents. He was very widely known both in business and in social life and his genial and helpful disposition endeared him to all of his associates. Mr. Manning as also president of the Continental Supply Co. and of the Youngstown Steel Products Co., both subsidiaries of the Youngstown Sheet & Tube Co.

(Continued on page 126)



# For the City of Palaces



The illustration above shows a train load of cast-iron pipe leaving our Burlington Works, to be reloaded on a steamer for Calcutta, India. It is part of a half mile of 36 in. and 42 in. pipe recently shipped to the Tata Iron & Steel Co., Ltd., at the above city. This was one of several train loads comprising the order.

It has been said of Calcutta "that its excellent water supply has done much for the sanitary condition of the city," and this order would indicate that every effort will be made to keep up this standard of excellence.

In India, modern materials are often handled by ancient methods as the illustration on the left shows. Here cast-iron pipe for a sugar house installation is being handled by elephant power.

Address Publicity Department, Burlington, N. J., for our new booklet, "USICAST PRODUCTS."

*For detailed description of our products see page 216 of the 1922 Edition of Gas Engineering & Appliance Catalogue.*

## United States Cast Iron Pipe and Foundry Company

**General Office: Burlington, New Jersey**

**SALES OFFICES:**

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Pittsburgh: Henry W. Oliver Bldg.
New York: 71 Broadway
Chicago: 122 So. Michigan Blvd.
St. Louis: Security Bldg.
Dallas, Tex.: Magnolia Bldg.
Birmingham: 1002 American Trust Bldg.
Cincinnati: Dixie Terminal Bldg.
Kansas City, Mo.: Interstate Bldg.
Minneapolis: Plymouth Bldg.
Cleveland: 1150 E. 26th St.
Buffalo: 957 E. Ferry St.
San Francisco: Monadnock Bldg.

**Virginia Representatives Named.**

The Graham B. Bright Co., Richmond, Va., have been appointed Virginia representatives for the T. L. Smith Company, of Milwaukee, manufacturers of the Smith concrete mixers, pavers, excavators and loaders.

**In New Offices and Salesrooms.**

Dufur & Co., manufacturers of wire and iron goods, Baltimore, Md., removed on July 1 from their old location at 309 N. Howard St., to 509 W. Franklin St., where they have established new offices and salesrooms.

**Two District Offices Opened**

The Whiting Corporation, manufacturers of cranes, foundry equipment, railway specialties, etc., Harvey, Ill., (a suburb of Chicago) has opened a district sales office at 1526 Jefferson County Bank Building, Birmingham, Ala., under the charge of W. R. Hans as district manager. The Birmingham office will handle sales in Alabama, Georgia, Tennessee and the northern part of Mississippi for the Whiting Corporation and its subsidiaries, the Grindle Fuel Equipment Co. and the Swenson Evaporator Co. Furthermore, the Whiting Corporation will open on July 1 a district sales office at 624 Penton Building, Cleveland, O., under the charge of R. P. Dryer as district manager. This office will have charge of the sales in Ohio of the Whiting Corporation and its subsidiaries.

**Office Opened at Dallas.**

A new southwestern sales office has been opened by the McWane Cast Iron Pipe Co., of Birmingham, Ala., at 1301 Magnolia Building, Dallas, Tex., under the charge of J. L. Hill, formerly of Birmingham. The new office will serve customers in Arkansas, Louisiana, Oklahoma, Texas, and New Mexico and also in the Republic of Mexico. It is stated that growth of sales of the company's new product—cast iron pipe as small as 1¼ and 2 inches with the McWane "Precalked" joint—has made the new office a necessity. Other district offices are located at Birmingham, Philadelphia and Los Angeles, with numerous warehouse stocks in these and other leading cities.

**Great Building Activity In Florida.**

Building activity throughout Florida, according to a survey made by the G. L. Miller Bond & Mortgage Co., of Miami, is much greater this year than it has for a number of years. The company finds that the industrial growth of the state has been measurably greater than the building activity in the chief centers of population and it reports that for the first five months of 1923 it has underwritten nearly $2,000,000 worth of first mortgage bonds, secured by income-earning property in Florida cities. It has financed building construction this year in Fort Myers, Ormond Beach, Miami Beach, Miami, Lake City, Orlando, St. Petersburg and Lake Worth.

**Value of Pulverized Limestone on Land.**

A notable demonstration of the value of lime with vetch is reported from Durham, N. C., by E. C. Blair, extension agronomist of the State College and State Department of Agriculture, as found on the farm of W. H. Chandler, of Durham County. Mr. Blair says that it is now becoming well known that lime is nearly always necessary in the growing of alfalfa and red clover but it has not been fully appreciated for use with other legumes. In the fall of 1921 Mr. Chandler applied ground limestone in the proportion of 2400 pounds per acre to half of a field, the other half being left unlimed. The following spring he planted soy beans and these were followed by rye and vetch last fall. Today he reports a thick, rank growth of vetch on the limed land, so thick that it has practically choked out the rye. Stems of the vetch are about three feet long here the soy beans were cut for hay last fall, and about four feet long where the soy beans were turned under. On the unlimed part of the field there is no vetch. These facts are cited by the American Limestone Co., Knoxville, Tenn., producers of Mascot pulverized limestone.


**? ? Need a Bank Directory ? ?**

Copies of the May-June, 1923, Desk Edition of the

**American Bank Reporter**

**are now available**

Contains a complete list of Banks, Bankers, Savings Banks and Trust Companies in the United States and Canada with names of Officers, Capital, Surplus, Undivided Profits, Loans, Deposits. Principal Correspondents, List of Foreign Banks, etc.

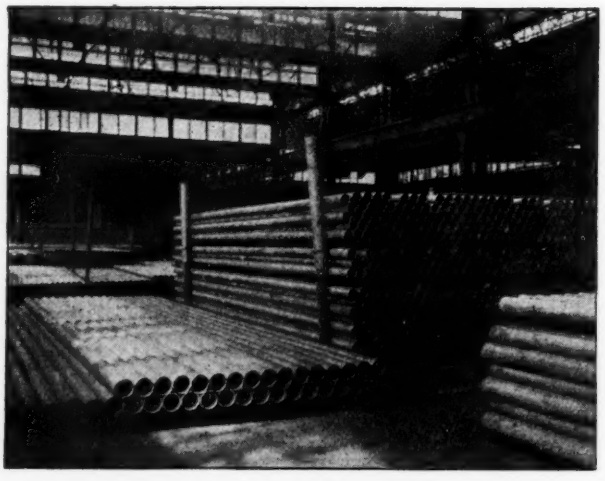
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*Section of stock room at tube plant*

Charcoal iron boiler tubes are extremely resistant to crystallization, corrosion, and electrolysis —qualities which insure exceptionally good service throughout a long period of life.

Boiler tube troubles are extremely expensive and every time you replace a tube, up goes your ultimate cost. When, therefore, you can considerably lengthen the life of your boiler tubes and cut down the percentage of replacements by using Genuine Old Fashioned Knobbled Charcoal Iron Boiler Tubes, you are keeping your true costs at the minimum. This is the reason many large railroads are using charcoal iron boiler tubes exclusively.

*Catalog on request*

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# BETHLEHEM




***A prominent engineer writes:*** "Your 'Maintenance Manual' is the most constructive piece of road literature that has come to my attention in years. Congratulations."

## A Road Maintenance Manual Every Engineer Should Have

ROAD authorities know that eternal maintenance is the price of good roads; that haphazard patching and treating of highways is more costly in the long run than a system of regular upkeep.

This manual shows how every type of road and pavement, except earth roads, can be easily repaired and maintained with Tarvia.

Whether or not you use Tarvia, this booklet will prove of great benefit to you in your work. "Road Maintenance with Tarvia" is recognized by engineers and road authorities as the most complete and helpful booklet on road maintenance that has ever been published.

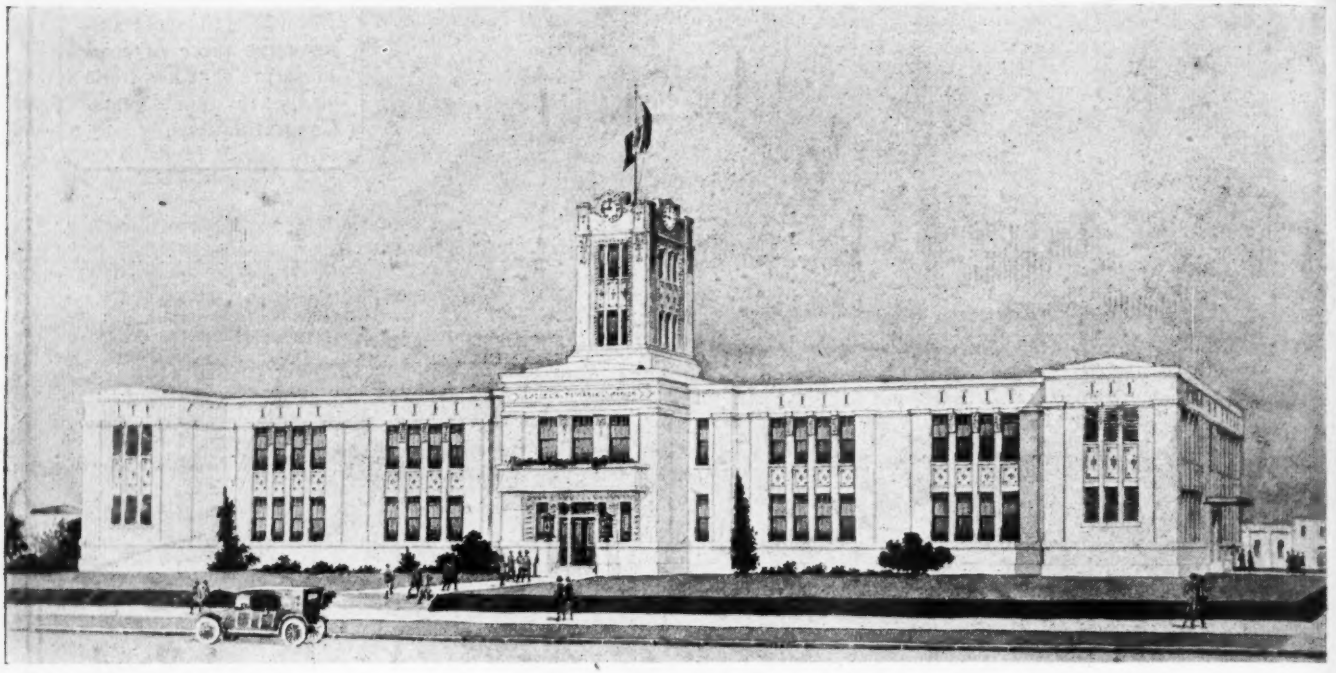
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# EXTENSIVE SCHOOL BUILDING PROGRAM INDICATION OF TREMENDOUS DEVELOPMENT NOW UNDER WAY IN MEXICO.



NEW AND MODERN HIGH SCHOOL BUILDING TO BE ERECTED AT TAMPICO, MEXICO, ONE OF SIX SIMILAR STRUCTURES NOW UNDER WAY IN STATE OF TAMAULIPAS ALONE—TYPICAL OF PRESENT NATION-WIDE DEVELOPMENT THROUGHOUT THE REPUBLIC—M. L. WALLER & CO., ARCHITECTS, SAN ANTONIO, TEX.

San Antonio, Tex., June 19—[Special.]—The extent of activities of Mexico at this time is not comprehended by the people of the United States generally. It is significant that the state legislature of Texas recently passed a resolution advocating recognition of the present government of Mexico by the United States. The people of Texas, which borders on Mexico for so great a distance, know more than do those of other states what Mexican conditions are today, and out of their knowledge comes this recommendation for closer relations.

An expression of opinion on the Mexico of the present was recently given your correspondent by M. L. Waller, architect of San Antonio, whose firm is getting up plans for half a dozen school buildings to be constructed in various cities in the state of Tamaulipas. Mr. Waller has gained first-hand information as to conditions in this state, and has knowledge of conditions throughout the Republic generally. The activities in Tamaulipas are typical of the development in all lines that is taking place all over Mexico.

"With the possible exception of the United States," said he, "I believe that Mexico is in better shape financially than any other country. The people have plenty of money—gold, not paper money. Everywhere there is evidence of this, and business is on a strictly cash basis. I am told that Tamaulipas has 3,000,000 pesos in gold in the banks ready to pay for all public work undertaken as it goes forward. Mexico is surely coming to the front."

The six high school buildings for which M. L. Waller & Company have plans under way will cost about 1,600,000 pesos or roughly $800,000. These will provide room for 3900 pupils daily. The contract for the first structure, to be erected at Matamoros, has been awarded to C. H. Hummer, contractor, of Brownsville, Tex., and will have a seating capacity of 800 pupils. A second similar structure will be erected at Matamoros; one for 300 pupils at Reynosa, another at Nueva Laredo to seat 1000, and one each at Victoria and Tampico, of similar capacity.

These structures represent the last word in up-to-date school building. They will be entirely fireproof, completely equipped, thoroughly ventilated and well lighted. Each will have an auditorium and manual training and domestic science departments. While the buildings are similar in architecture to American school buildings the clock tower in the center of each structure is distinctly Mexican. The accompanying illustration of the new school building to be erected at Tampico is similar in general outline and design to the six buildings under way in Tamaulipas. Plans for all the buildings will be completed speedily and as soon as possible contracts will be awarded. While bricks and similar materials available in the localities are being used, large amounts of supplies and materials will be purchased in the United States.

To put every child of scholastic age in modern, fireproof buildings, where they can get the full benefit of grammar and high school grades as well as specialized technical and agricultural training, is the aim of Caesar Lopez de Lara, Governor of Tamaulipas. He has inaugurated a building program which when complete will give to his state about 30 modern structures, and his aim is to put a school building in every town able to support one. There has just been placed in operation at Victoria a thoroughly equipped agricultural college, completed at a cost of 300,000 pesos. About 200 students are in attendance. In addition a technical college is being constructed at Victoria to cost about 500,000 pesos.

According to Mr. Waller, Governor de Lara has had a most remarkable career for so young a man, having started in Carranza's army at the age of 22, organizing his own company and then gradually working up to the rank of general. Then he was elected Governor of his native state, and he hopes to complete his big school building program within the next two years, when his term expires. He is said to be a great friend of the United States and offers a welcome to American capital. He rightly appraises the immense resources of his country, which are so largely undeveloped now.